

THE INTELLIGENCE OF SEEING

An inquiry into the relationships between perception theory, communication theory and the practice and teaching of drawing.

VOLUME 2



IMAGING SERVICES NORTH

Boston Spa, Wetherby
West Yorkshire, LS23 7BQ
www.bl.uk

THESIS CONTAINS

VIDEO

CD

DVD

TAPE CASSETTE

TABLE OF CONTENTS VOLUME 2

List of Figures

ii

Figures

Appendices

A.	The new drawing programme	1
B.	Pilot study results 1980-81	26
C.	Pilot study results 1996-7-8	64

List of Figures

All dimensions in centimetres. Height followed by width.

Introduction

Figure (I) Paradigms of research. Adapted from Denzin & Lincoln (1994 : 109)

Section 1

- 1.1 Michelangelo *Study for Adam for the Sistine Chapel ceiling* c1508 Red chalk over charcoal on paper 19 x 25.7 British Museum
- 1.2 John Zoffany *The life class at the Royal Academy* 1772 Windsor Castle
- 1.3 John Ruskin *Moss & wild strawberry* c1880 Pencil and white chalk 54 x 38
- 1.4a Alphonse Legros *Figure study at the Slade* c1880-1890 Graphite on paper. Metropolitan Museum of Art, New York.
- 1.4b William Rothenstein *Porphyria* 1894 oil on canvas
- 1.5 Henry Tonks *Sheet of studies* c1925 Pencil 38 x 25 Slade School
Head of Girl c1925 Black chalk 38 x 22 Slade School
Girl eating an apple c1925 Pencil 39 x 27.5 Slade School
- 1.6 Henry Moore *Standing figure* 1923 Pencil, chalk and watercolour 40.6 x 21
- 1.7 Peter Blake *Self portrait with buttons* 1961 Oil on canvas
- 1.8 David Hockney *Celia in a black dress with white flowers* 1972 Crayon 43 x 35.5
- 1.9 Teaching structure of the Moscow Vkhutemas. From Barron and Tuchman (1980 : 83)
- 1.10 Liubov Popova cover for $5 \times 5 = 25$ exhibition
- 1.11 Vladimir Tatlin *drawings for Monument to the Third Internationale* 1921
- 1.12 Vladimir Tatlin *Life drawings* 1911-14 Pencil on paper
- 1.13 Kazimir Malevich *An Englishman in Moscow* 1914 Oil on canvas 88 x 57 Stedelijk Museum, Amsterdam

- 1.14 Vladimir Tatlin *Painting relief* c1914
- 1.15 Kazimir Malevich *Suprematist drawing* 1915
- 1.16 Vladimir Tatlin *Corner-relief* 1915
- 1.17 Kazimir Malevich *Death of a man simultaneously in an aeroplane and on a railway* 1913 Lithograph from the book *Explodity*
- 1.18 Paul Klee *Perception of an animal* 1925 Ink on paper Busch-Reisinger Museum, Harvard University
- 1.19a Johannes Itten Analytical drawing of Meister Francke's *Adoration* 1921
- 1.19b Max Peiffer-Watenphul *Nudes (movement to rhythm)* c1920 Charcoal on paper. Bauhaus-Archiv, Darmstadt
- 1.20 Oscar Schlemmer *Man* 1928 Schematic representation showing human relationship to space and time, nature and ideas, together with mechanical and biological functions. Ink and coloured pencil on paper. Bauhaus-Archiv, Darmstadt
- 1.21a Paul Klee *Teaching notes* 1921-22
- 1.21b Gertrud Arndt *Colour studies* 1923-4
- 1.22a Wassily Kandinsky *Variation IV* 1924 Ink and gouache on card
- 1.22b Hanns Beckman Studies from Kandinsky's preliminary course in analytical drawing: definition of forms; accentuating principal tension components; determination of focus of composition; reduction to linear shapes, emphasising energy relationships. 1929
- 1.23a Lazlo Moholy-Nagy *Large field with construction* c1920 30 x 25.5 Whereabouts unknown
- 1.23b (centre) Marianne Brandt. Equilibrium studies in wood, sheet metal and wire. From Maholy-Nagy's preliminary course 1923
- 1.24a Josef Albers *Surrounded* 1933 woodcut. Bauhaus-Archiv, Darmstadt
- 1.24b Student work from Albers' preliminary course. Investigation of optical illusions c1927 Ink on paper.
- 1.25 Herbert Bayer *Mural* 1923 Ground floor workshop wing, Weimar Bauhaus
- 1.26 William Coldstream *Bolton* 1938 Oil on canvas 72 x 91.5
- 1.26a Claude Rogers *Lifedrawing*

- 1.27a William Coldstream *Reclining nude* 1953-4 Oil on canvas 87 x 134.5
- 1.27b Euan Uglow *Curled nude on stool* 1982-3 Oil on canvas 77 x 100
- 1.28 Patrick George *Waterloo station from a window* c1947
- 1.29 David Bomberg *Evening light, Ronda 1956* Charcoal on paper 45.8 x 61
Collection of the artist's family
- 1.30a Frank Auerbach *Woman with hands clasped on head* 1951 Charcoal
- 1.30b Frank Auerbach *Portrait of Sandra* 1973-4 Charcoal
- 1.31a Victor Pasmore *Hanging gardens at Hammersmith No. 1* 1944-47 Oil on canvas
78.7 x 109.2 Private collection
- 1.31b *Abstract in white, black and maroon* 1956/7 Relief, painted wood 108 x 101.5
Private collection
- 1.32 Teaching exercises by students of Richard Hamilton, Victor Pasmore and Tom
Hudson
- 1.32a *Point exercise and linear development* (RH) c1957
- 1.32b *When does line become shape?* (RH & VP) c1957
- 1.32c *Invention of graphic language* (TH) c1961
- 1.33 Richard Long *A line made by walking* 1967
- 1.34 Cover of *Art-Language* Vol. 1 No. 3 June 1970
- 1.35 Art & Language *Portrait of V.I. Lenin with cap in the style of Jackson Pollock,
III* 1980 Enamel on canvas 239 x 210
- 1.36 Philosophical bases for the teaching of drawing

Section 2

- 2.1 Indirect perception model
- 2.2 Gestalt squareness
- 2.3 Gestalt principles of perceptual organisation
- 2.4 Section through an ambient optic array
- 2.5 Representational framework for deriving shape information from images. From
Marr (1982 : 37)

- 2.6 The results of applying an algorithm to random-dot stereograms. From Marr & Poggio (1976 : 286 Figure 5)
- 2.7 From Marr & Nishihara (1978 : 278)
- 2.8 Levels of information-processing devices

Section 3

- 3.1 Kazimir Malevich *Portrait of the composer Matuishin* 1913 Oil on canvas 106.7 x 106.7 Tretyakov, Moscow
- 3.2 Kazimir Malevich *Suprematist painting* 1915
- 3.3 Diagram of compositional geometry of Kazimir Malevich's *Painterly realism of a footballer* 1915 Oil on canvas 70 x 44 Stedelijk Museum, Amsterdam (From Milner 1996 : 217)
- 3.4 Mikhail Larionov *The cockerel* 1913 Oil on canvas
- 3.5 Roman Jakobson's functions of language

Section 4

- 4.1 Distance/angle invariant ratio
- 4.2 Rate of change of textural density
- 4.3 Mapping systems
- 4.4 Categories of projection types. BS 1192
- 4.5 Multi-plane orthographic projection
- 4.6 Axonometric projection
- 4.7 Oblique projection
- 4.8 Perspective projection
- 4.9 Reclassification of BS 1192 in terms of secondary geometry
- 4.10 Pablo Picasso *Woman and mirror* 1937 Oil on canvas 130 x 195

- 4.11 Uta Uta Tjungala *Kaakurnatintja* n.d. From Lake McDonald region, Northern Territory, Australia. Acrylic on hardboard 187 x 154.5
- 4.12 Bhawani Das *Aurangzeb and courtiers* c1710
- 4.13 Punjabi *The gale of Love* c1810-20 Victoria & Albert Museum
- 4.14 Giotto *The annunciation to Anne* c1304-08 Fresco. Arena Chapel, Padua
- 4.15 Perspective construction as demonstrated by Leonard da Vinci
- 4.16 Pictorial cues for depth
- 4.17 Principles of line drawing
- 4.18 Ambiguous drawings and reversible figures
- 4.19 René Magritte *Treason of images* 1927 Oil on canvas
- 4.20 Children's drawings of a table. From Willats (1997 : 11)
- 4.21 Michaelangelo *God separating the earth from the waters* c1508-12 Fresco. Sistine Chapel, Rome
- 4.22 Triad of perceptual mode, semiotic code, and social structure
- 4.23 Nascan geolyph, Southern Peru. From *Flightpaths to the Gods* BBC 1997
- 4.24 Leonardo da Vinci *Dissection of the principal organs and arterial system of a woman* c1500 Pen and ink wash over black chalk on coloured washed paper 47.8 x 33.3 Royal Library 1228IR
- 4.25 Marcel Duchamp *LHOOQ* c1919 Pencil over postcard
- 4.26 Damien Hirst *Some comfort gained from the acceptance of the inherent lies in everything.* 1996. Two dissected cows in twelve tanks of formaldehyde. Saatchi collection
- 4.27 Rachel Whiteread *House* 1993 Concrete (since demolished)
- 4.28 Diagram of relations between the social, the perceptual, and the semiotic
- 4.29 The visual aesthetic production process
- 4.30 Shorty Lungkarta Tjungurrayi *Untitled* 1972 Acrylic on board 58.1 x 49.4

- 4.31 Jan Vrederman de Vries *Perspective* 1606
- 4.32 Chart of a systemic-functional semiotics of drawing
- 4.33 William Powell Frith *The railway station* 1862. Oil on canvas 116.7 x 125.4, Royal Holloway and Bedford New College.
- 4.34 Claude-Oscar Monet *The Gate St. Lazare* 1877. Oil on canvas 54.3 x 73.6, National Gallery.
- 4.35 Will Roberts *Phyllis* 1962. Charcoal on paper.
- 4.36 Will Roberts *Tyn y Waun* 1968. Oil on canvas.
- 4.37 Robert Newell *Glaciated rocks: Nant Ffrancon* 1996. Pencil and watercolour on paper 50.8 x 71.
- 4.38 Howard Riley *Surfaces and edges. Perth Zoo, Western Australia* c1988. Coloured pencil on paper 35.5 x 37.5.
- 4.39 Howard Riley *Fremantle street* 1986. Pencil on paper 15 x 21.
- 4.40 Howard Riley *Depiction precedes language* 1992. Oil pastel on paper 18 x 24.

Section 5

- 5.1 Results of Nominal Group Technique tests
- 5.2 Results of Semester 1 1998-99 Likert Scales
- 5.3 Results of Semester 2 1998-99 Likert scales
- 5.4 Results of Semester 1 1999-2000 Likert scales
- 5.5 Results of Semester 2 1999-2000 Likert scales

Students' drawings

- 5.6 Tom Alberts
- 5.6a Tom Alberts
- 5.7 Lisa Moore

5.8	Ashley Hay
5.9	Cally Browning
5.10	Martin Carter
5.11	Paul Carpenter
5.12	Greg Pelc
5.13	Peter Fox
5.14	Becky Macey
5.15	Ryuen <i>Diagram of Gion Shinto shrine 1330</i>
5.16	Anonymous
5.17	Jenny Cobb
5.18	William Reimnitz
5.19	Amanda Maria
5.20	Amanda Maria
5.21	Amanda Maria
5.22	Heather Simmonds
5.23	William Reimnitz
5.24	Heather Simmonds
5.25	Amanda Maria
5.26	Nigel Williams
5.27	Samantha Geizekamp
5.28	Michelle Lee
5.28a	Michelle Lee
5.29	Ashley Hay

5.30	Russell Maggs
5.30a	Russell Maggs
5.30b	Russell Maggs
5.30c	Russell Maggs
5.31	Examples from a pilot study, ' <i>drawing conventions workshop</i> ' 1989
5.32	Heather Simmonds
5.33	Nigel Williams
5.33a	Nigel Williams
5.33b	Nigel Williams
5.33c	Nigel Williams
5.34	Anna Papadopoulou
5.35	Adam Richards
5.36	Adam Richards
5.36a	Adam Richards
5.37	Amanda Maria
5.38	Jenny Cobb
5.39	Robyn O'Grady
5.40	Anonymous
5.41	Adrian John
5.42	William Reimnitz
5.43	Adam Richards
5.44	Adam Richards
5.45	Lyndsay Woods

5.46

Lyndsay Woods



Figure 1.1

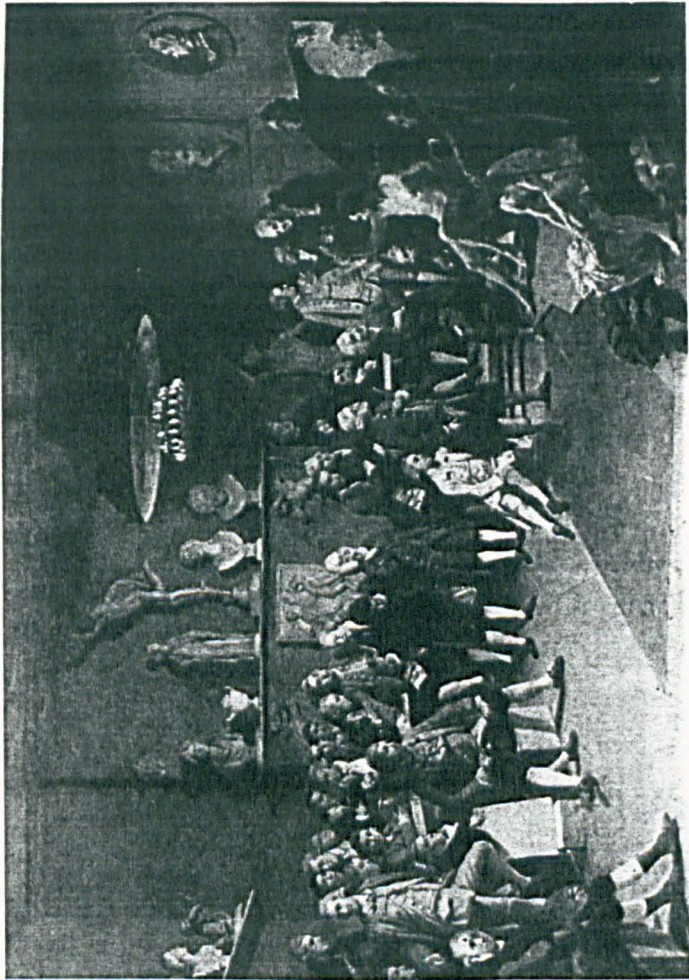


Figure 1.2



Figure 1.3

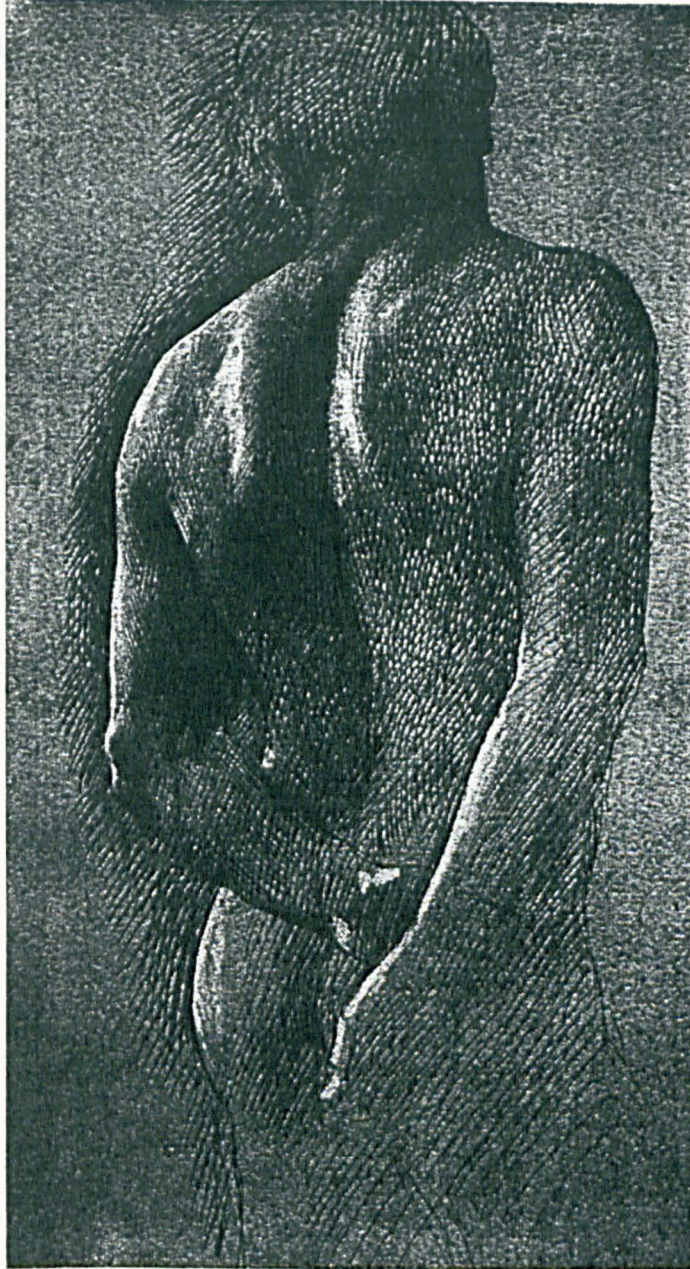


Figure 1.4a



Figure 1.4b



Fig. 5. Henry Tonks: *Sweet of Studies*. Sanguine and pencil. 141 - 10 in., 38 - 25.5 cm. Slade School.
Fig. 6. Henry Tonks: *Head of a Girl*. Black chalk. 15 - 81 in., 38 - 22 cm. Slade School.
Fig. 7. Henry Tonks: *A Girl eating an Apple*. Pencil. 151 - 101 in., 39 - 27.5 cm. Slade School.

Figure 1.5

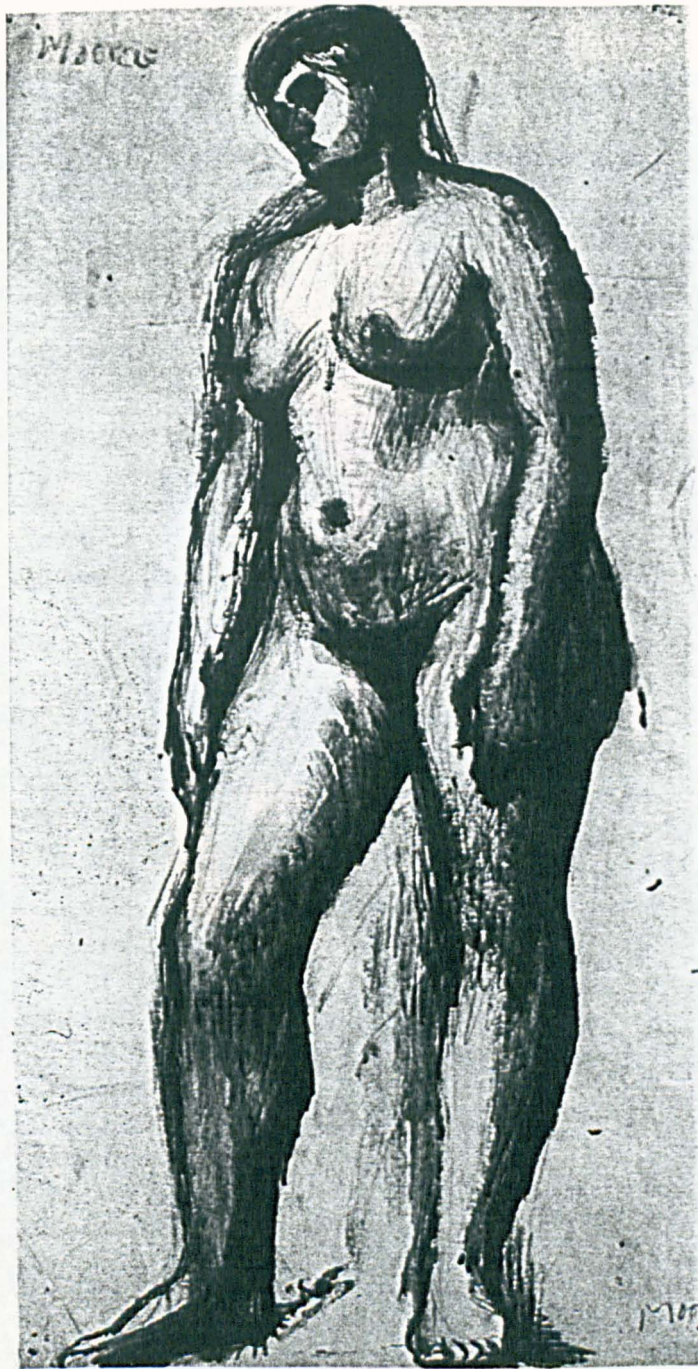


Figure 1.6



Figure 1.7



Figure 1.8

The Vkhutemas: an Interim Schema

Basic Division	Three focii (kontsentry) (N. Ladovsky's "psycho-analytic" method used as framework for Basic Division's curriculum) Two year course, 1920-25 One year course, 1926-30	Departments	Second to fifth year of study after Fall 1926	Department Sections	Department Instructors	
Graphic Focus	Instructors: I. Efimov V. Favorsky V. Kiselev P. Miturich R. Pavlinov A. Rodchenko	Printing and Polygraphy		Section 1: Graphic Arts Section 2: Printing Technology and Techniques	L. Bruni V. Favorsky P. Miturich D. Moor I. Nivinsky P. Novitsky P. Pavlinov N. Piskarev N. Sheverdayev and others	
Planar Color Focus	Instructors: L. Popova, Color Construction A. Vesnin, Color Construction A. Osmerkin, Exposure of Forms by Light Fedorova, Exposition of Light I. Kliun, Suprematism A. Drevin, Simultanism N. Udaltsova, Construction of Mass and Space A. Exter, Rhythm of Mass; Transition from Nature to Abstraction	Painting		Section 1: Easel Painting Pedagogic section Section 2: Monumental Painting Murals, frescoes Section 3: Decorative Painting Set design for stage, film, and mass festivals	A. Drevin V. Favorsky S. Gerasimov R. Faik K. Istomin D. Kardovsky P. Konchalovsky P. Kuznetsov I. Mashkov A. Osmerkin A. Shevchenko B. Uitz and others	
Program developed by V. Favorsky 1922-23		Textile		Section 1: Weaving Section 2: Printing and Dyeing	N. Bavstruk M. Bezzubets D. Gruin A. Kuprin L. Maiakovskaia G. Makarov A. Shagurin M. Tikhomirov N. Sobolev P. Viktorov and others	
Volume-Space Focus	Volume Construction Instructor: A. Lavinsky Spatial Construction Instructors: N. Dokuchaev V. Krinsky N. Ladovsky	Sculpture	Volume Focus 1925-30	Section 1: Monumental Sculpture Section 2: Pedagogic Sculpture Prepared future teachers of sculpture	S. Bulakovsky I. Chaikov I. Efimov A. Golubkina S. Konenkov B. Mukhina-Zamkova and others	
		Ceramics		Section 1: China-Faience Section 2: Glass Section 3: Clay	I. Chaikov I. Efimov I. Kitaigorodskov A. Kuprin P. Kuznetsov D. Shterenberg and others	
		Woodworking 1920-28	Wood and Metal Working 1928-30	Section 1: Construction Product design Section 2: Composition Materials, surfaces, finishes	G. Klucis, 1924-?, Color studies El Lissitzky, 1925-?, Furniture design I. Lamstov, 7-?, Nature of materials A. Malishevsky, 1920-?, Technical Dean: A. Rodchenko, 1920-30, Design, Metal constructions	
		Metalworking 1920-28				
		Architecture 1920-26		Section 1: "Academic Group" I. Zholtovskiy "New Academy" 1922-?, I. Golosov, K. Melnikov Section 2: "New Research Group" Autonomous section of the architectural faculty Laboratory Model Studio A. Efimov, Obligatory to all students Monumental Architecture V. Krinsky Communal Architecture ? Planning Section N. Dokuchaev Decorative-Spatial Section N. Ladovsky	Architectural Laboratory 1927-30 N. Ladovsky	N. Dokuchaev A. Efimov A. Etkin M. Ginzburg I. Golosov V. Kokorin V. Krinsky A. Kuznetsov N. Ladovsky K. Melnikov R. Muratov E. Norbert V. Semenov A. Shchusev S. Toropov A. Vesnin L. Vesnin I. Zholtovskiy and others Deans: A. Rukhliadev I. Rylsky
		Architecture Fall 1926-30		Section 1: Housing Section 2: Public Buildings/Industrial Complexes Section 3: Planning and Design of Public Spaces	Experimental Institute 1920-26 N. Ladovsky	

Compiled by Kestutis Paul Zygas, Stephanie Barron, and Szymon Bajku. Design and typography by Joe Molloy

Figure 1.9

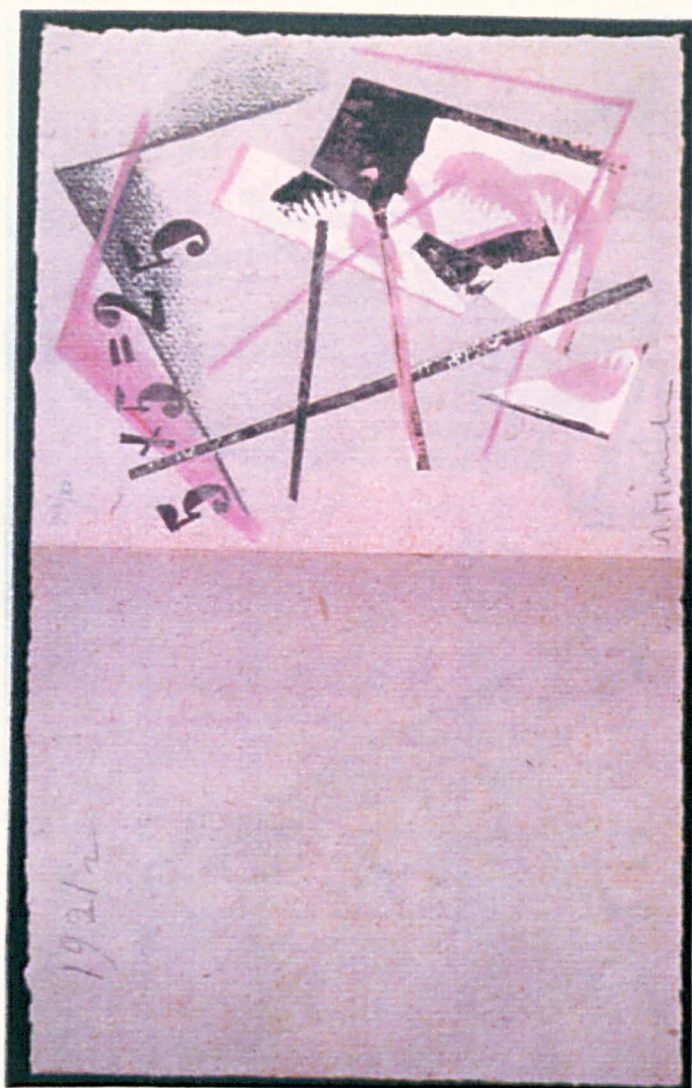


Figure 1.10

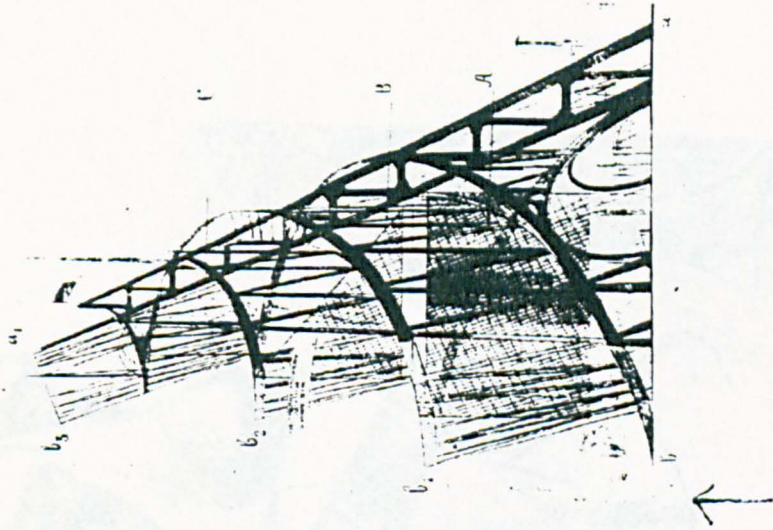
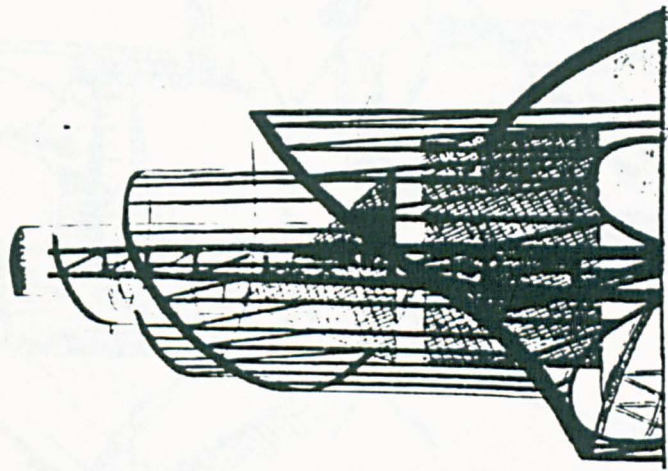


Figure 1.11

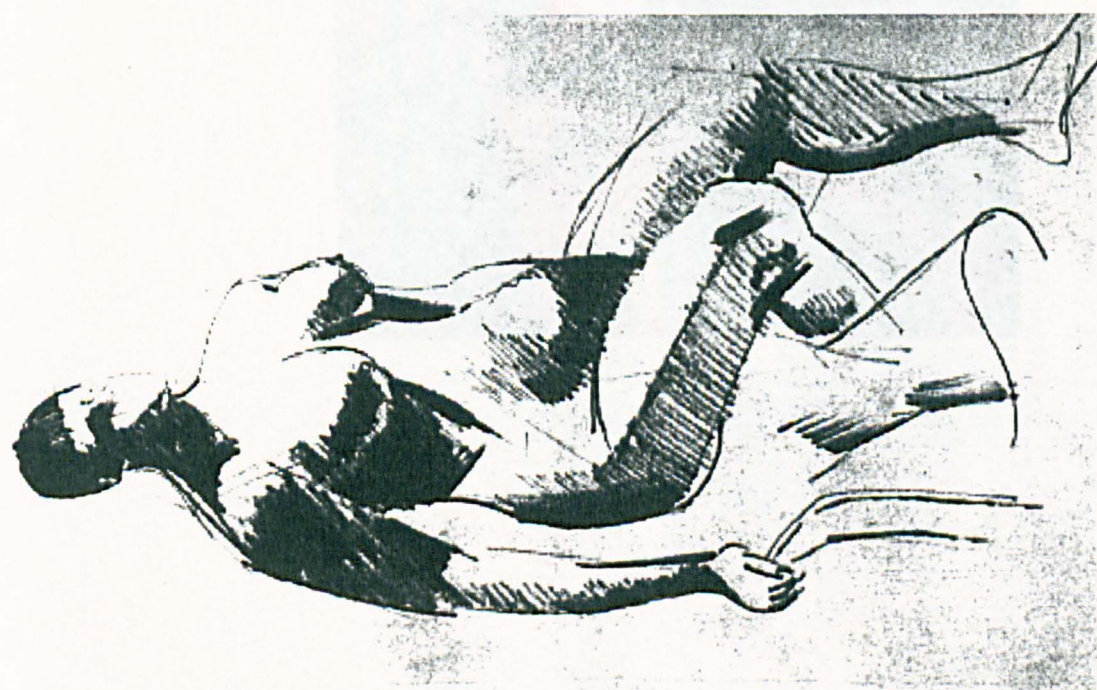
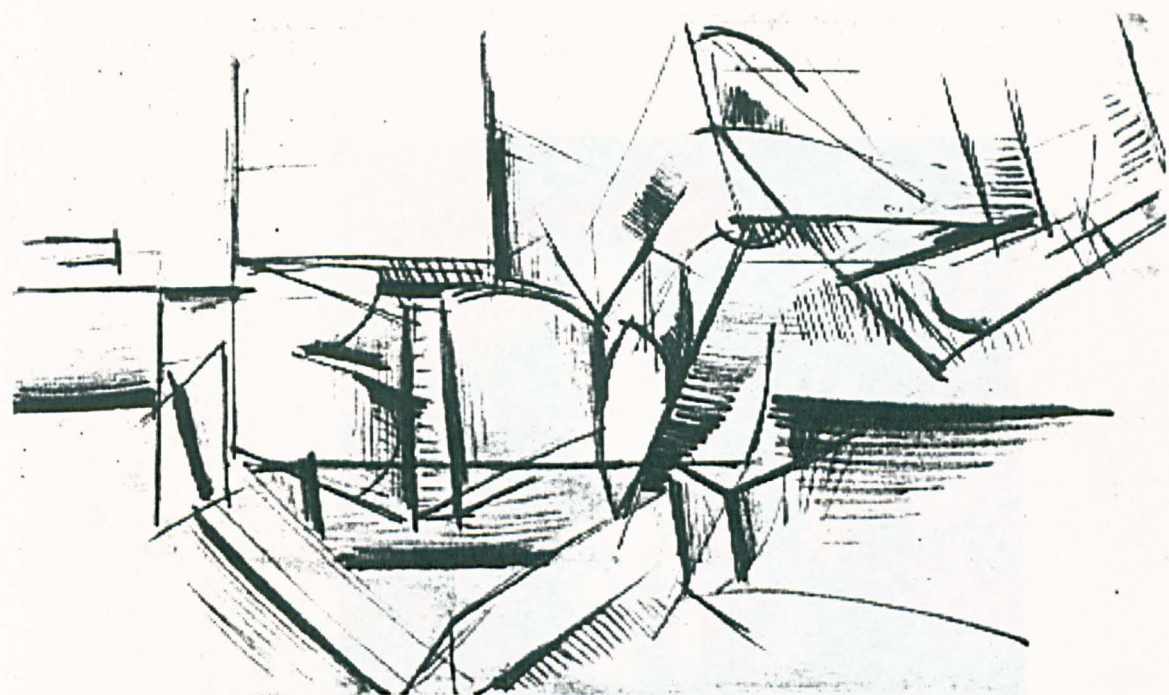


Figure 1.12



Figure 1.13

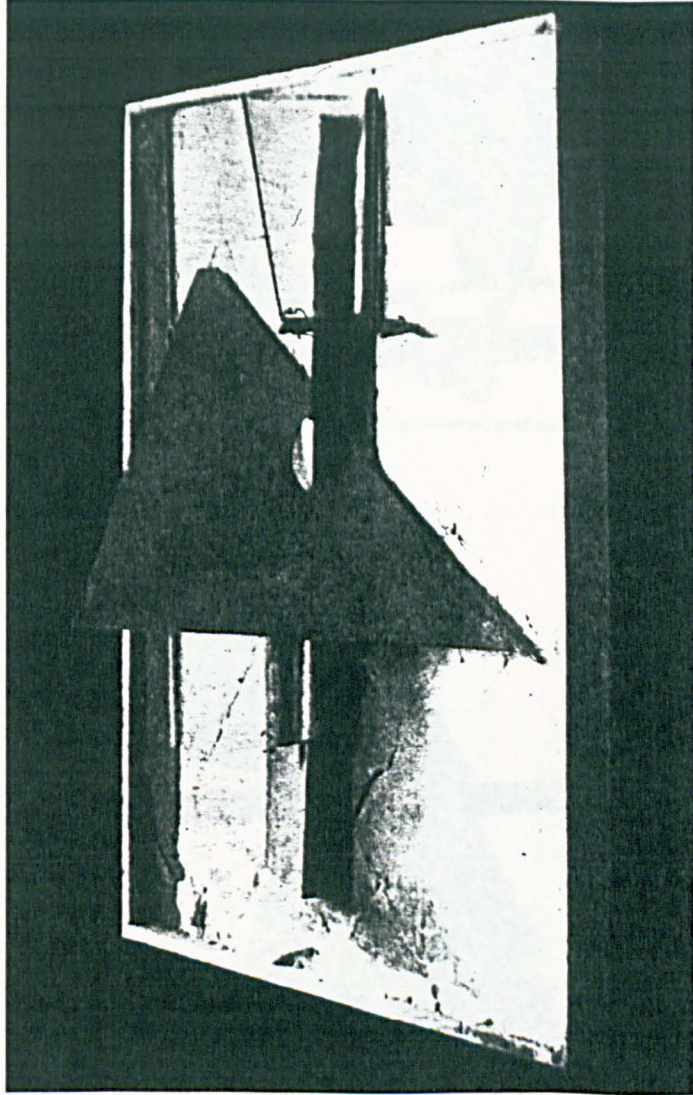


Figure 1.14

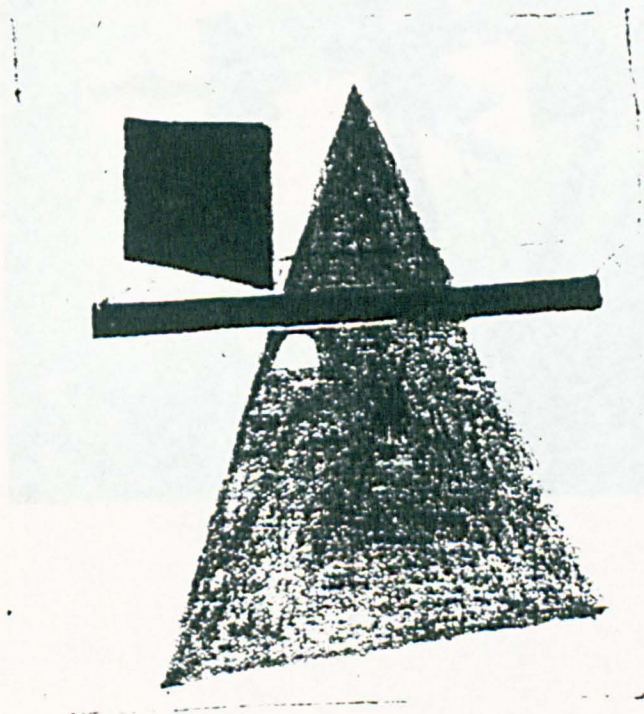
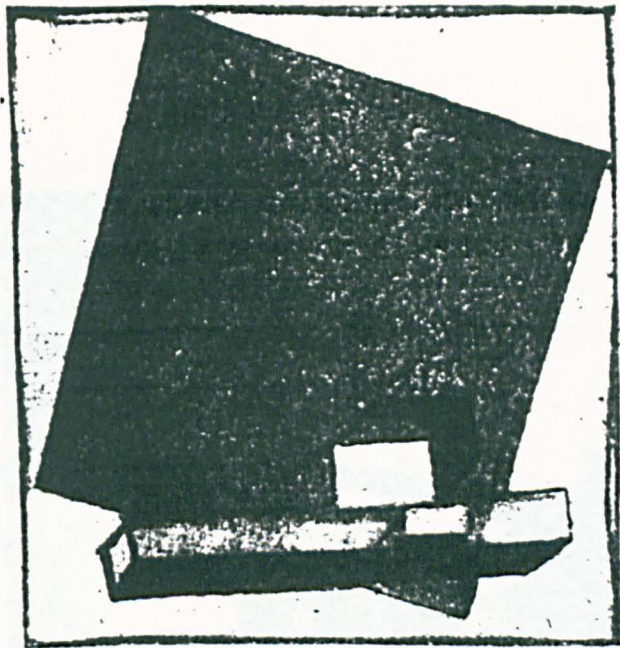


Figure 1.15

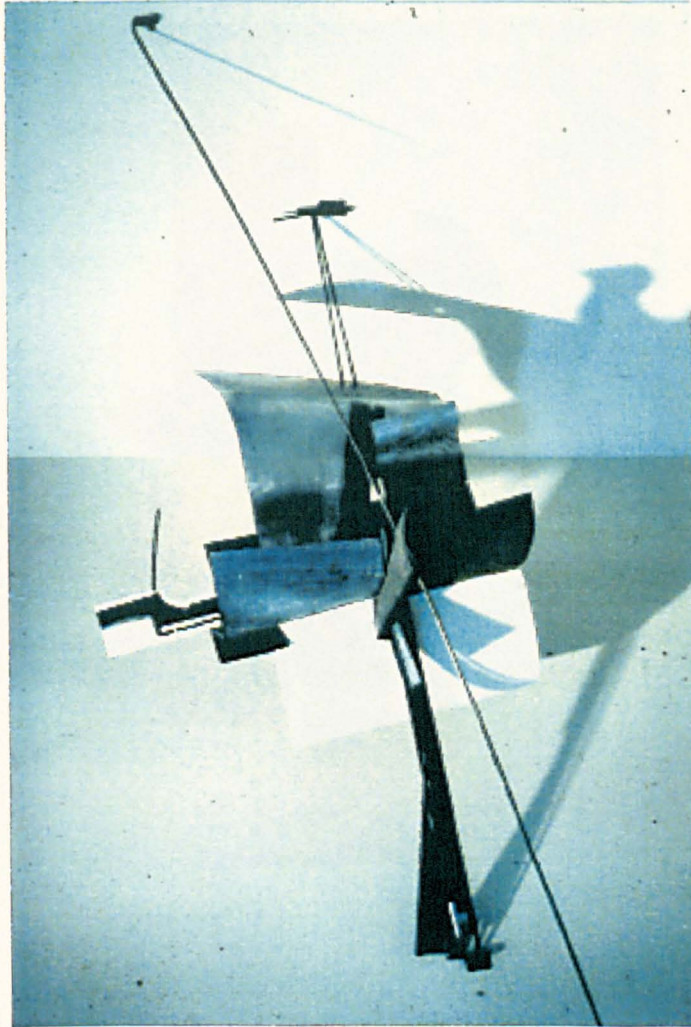


Figure 1.16

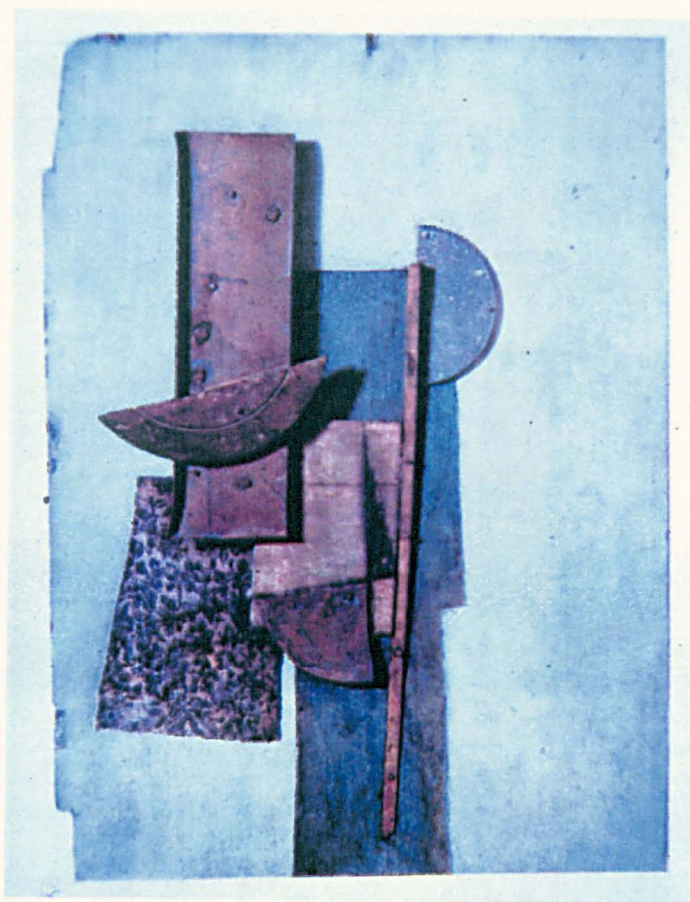


Figure 1.16a

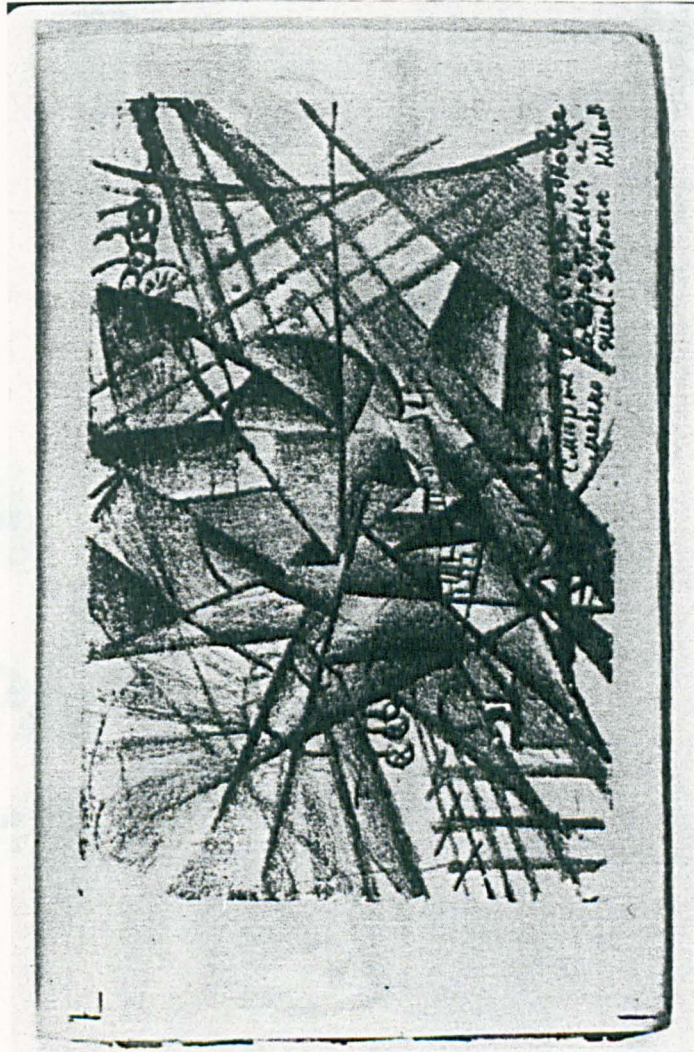


Figure 1.17



Figure 1.18

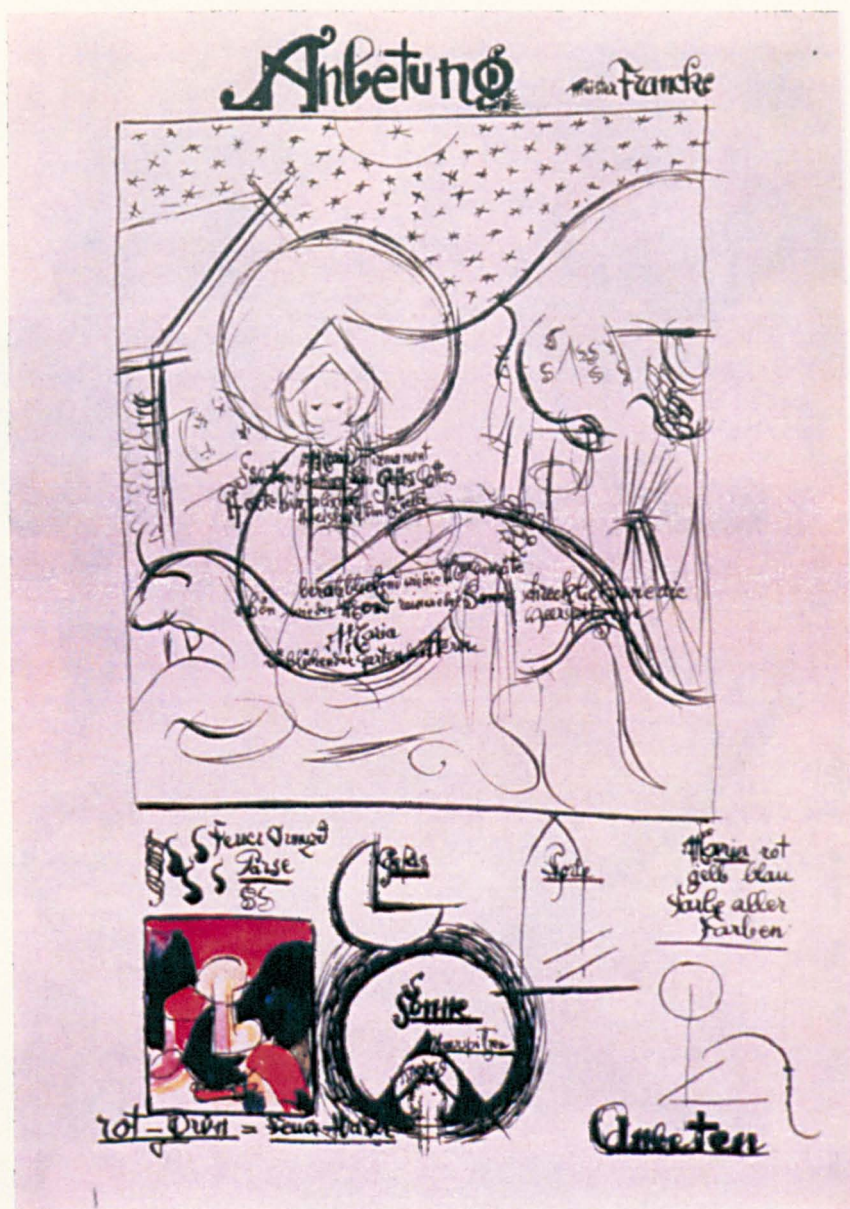
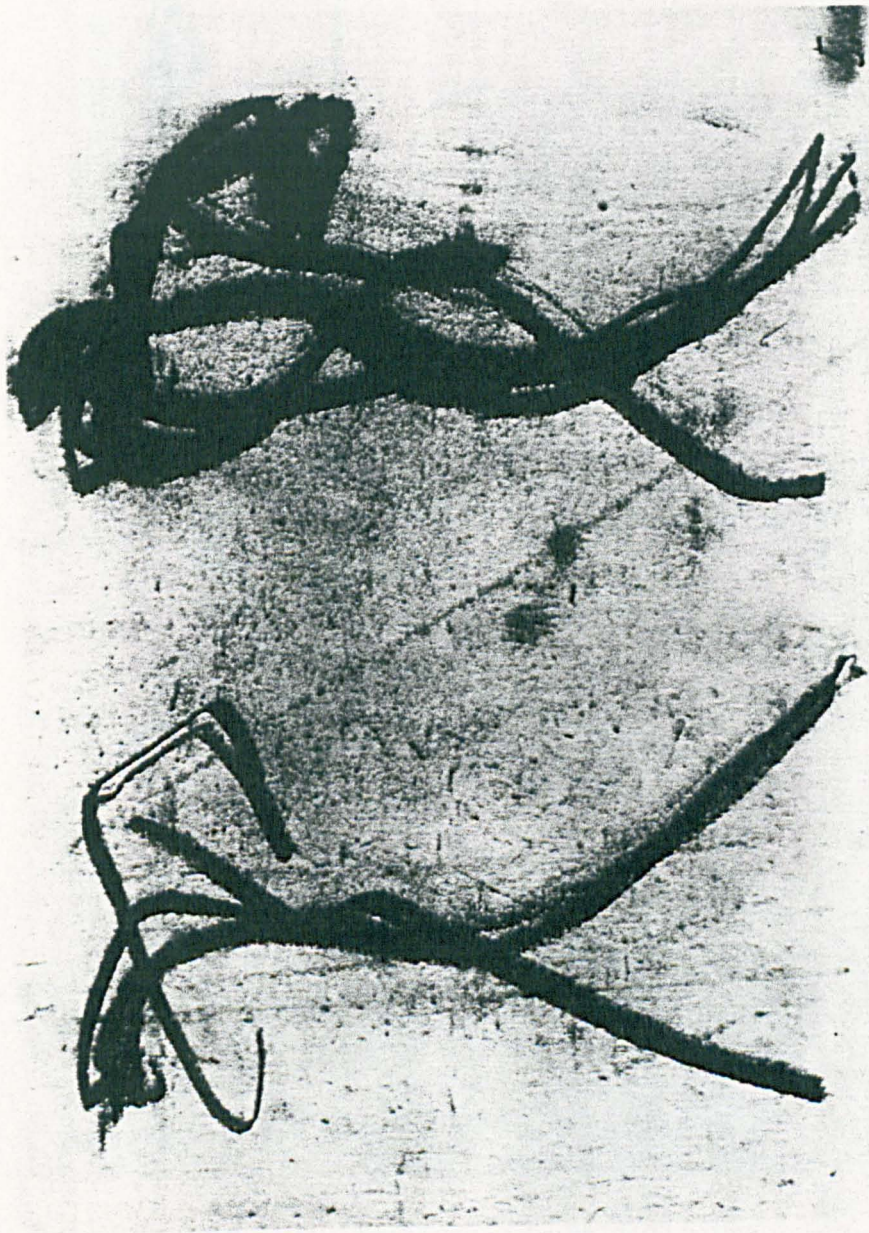


Figure 1.19a



. Alle (Bergarten) sind d. Kalkstein.



Figure 1.19b

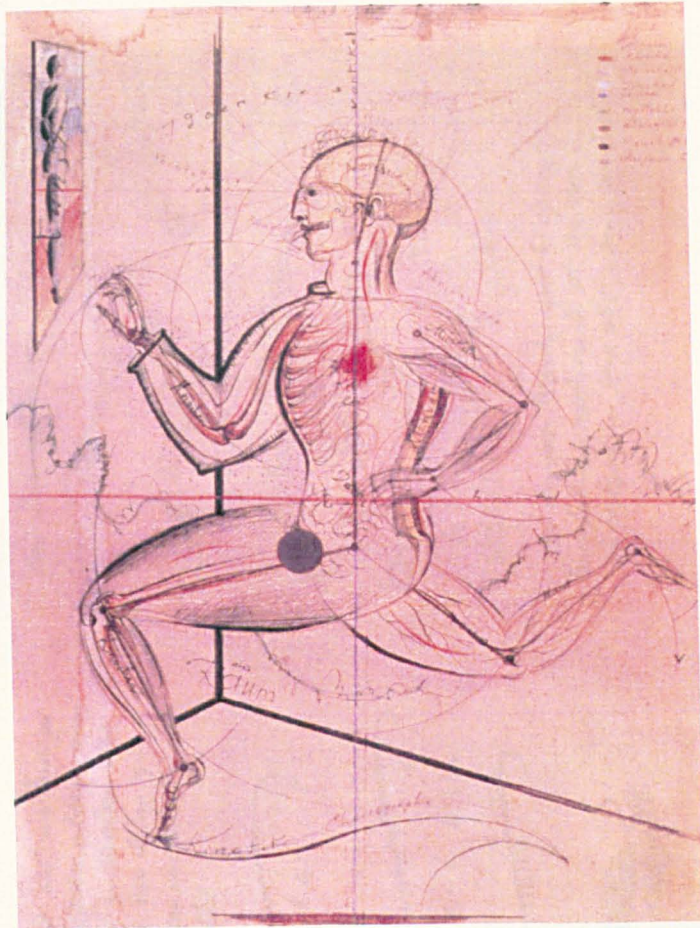


Figure 1.20

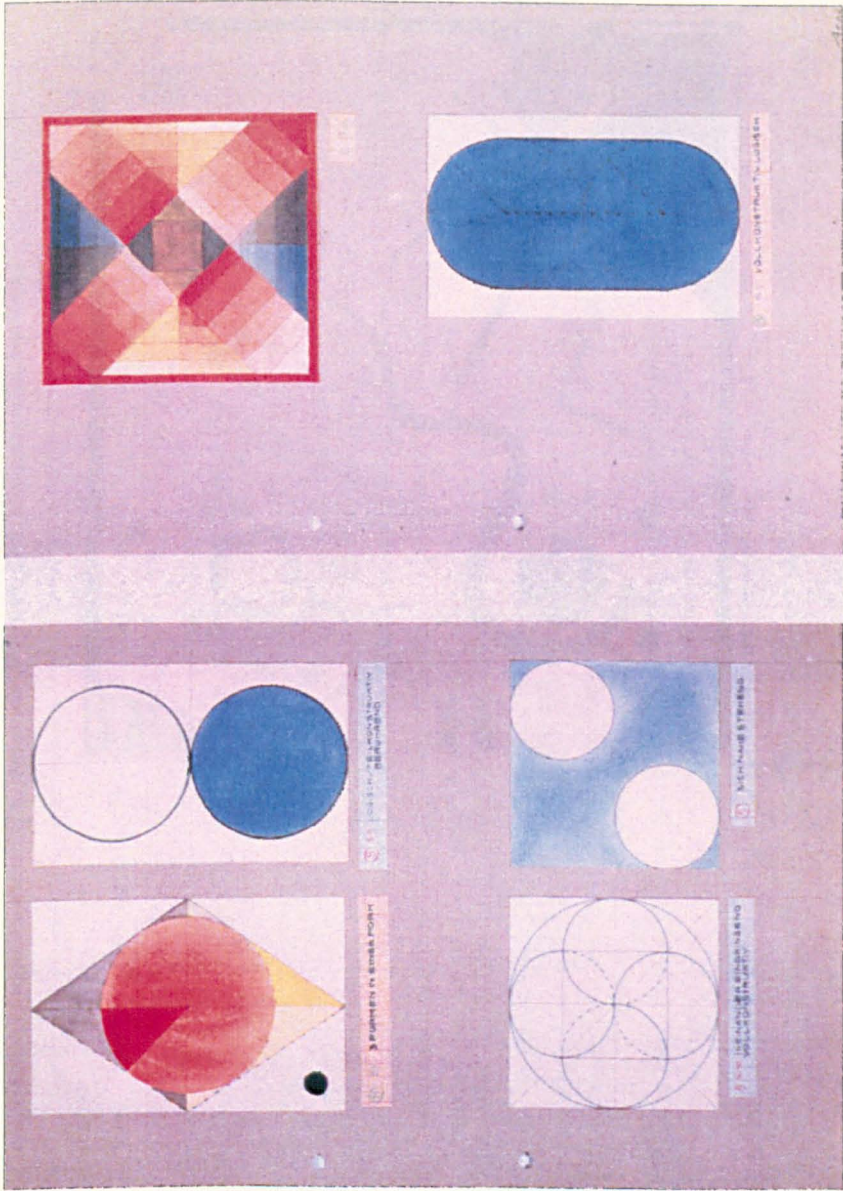


Figure 1.21b

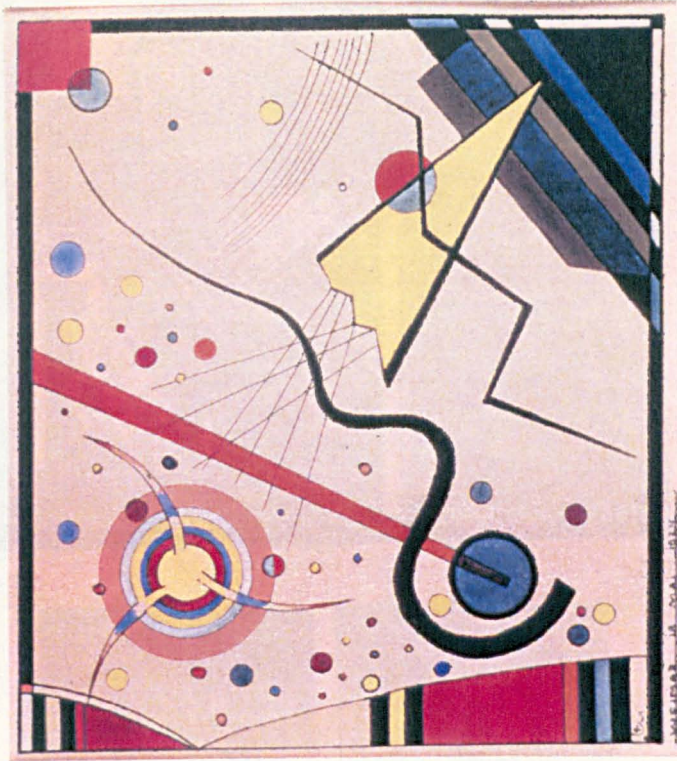


Figure 1.22a

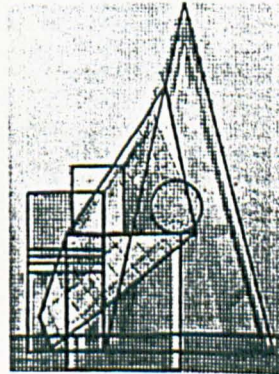
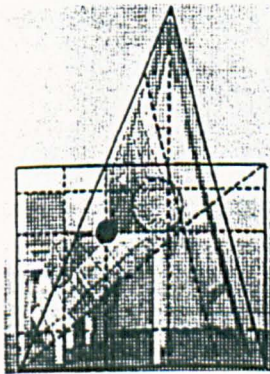
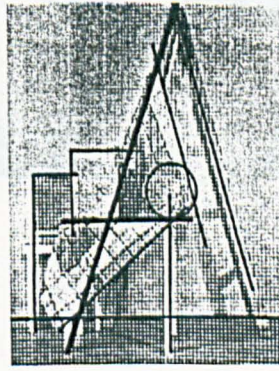
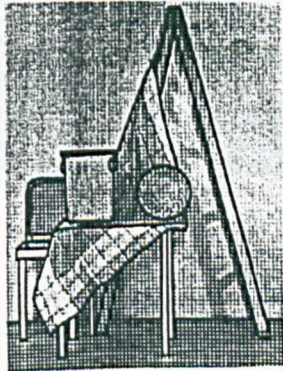
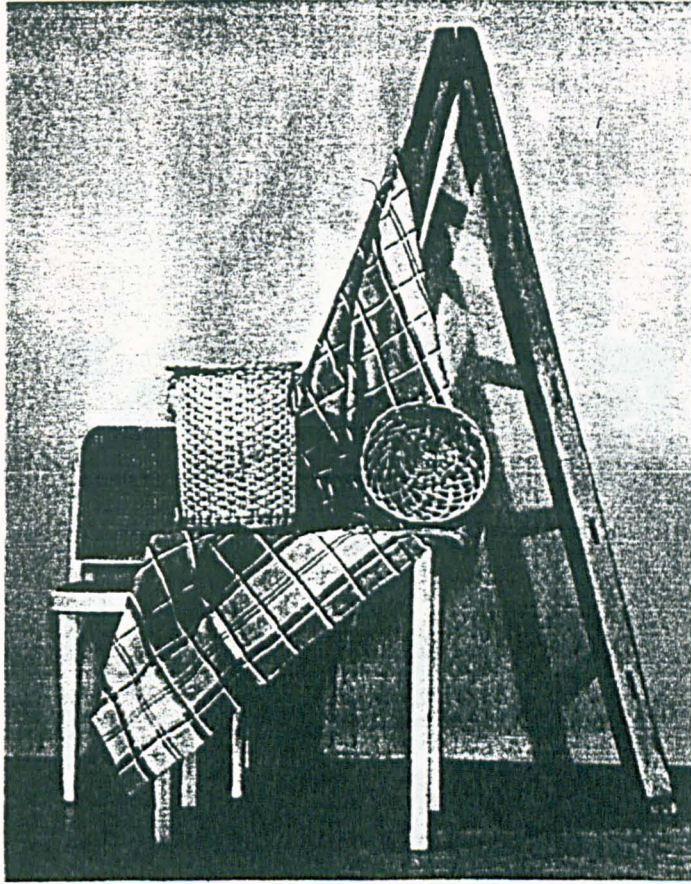


Figure 1.22b

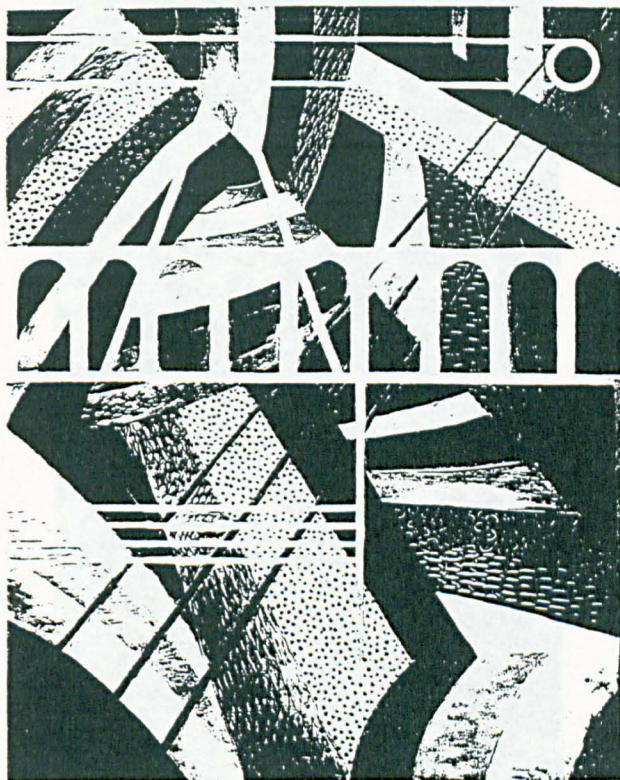


Figure 1.23a

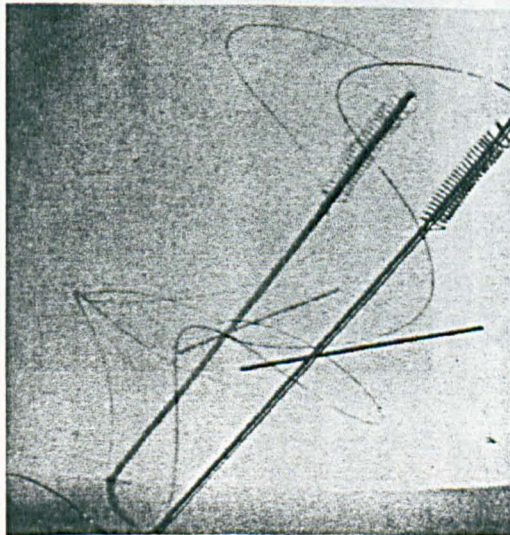
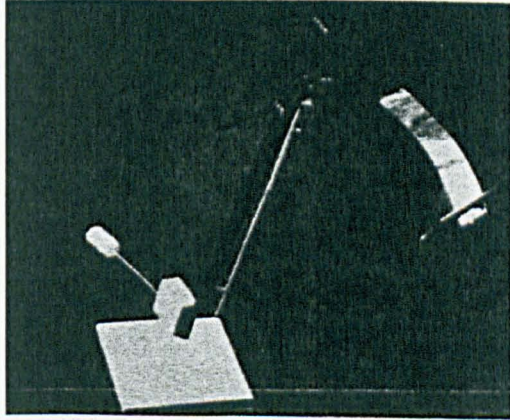
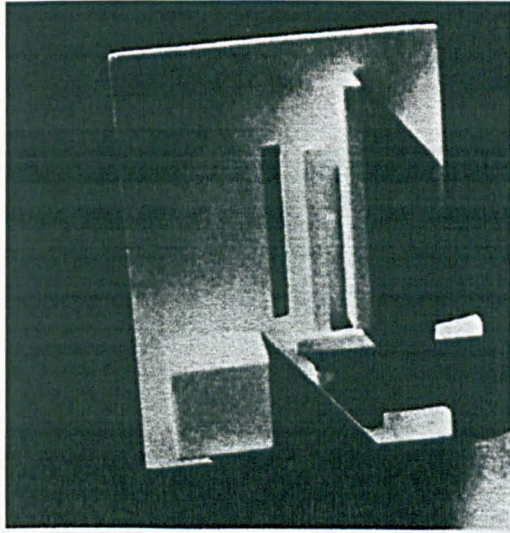


Figure 1.23b

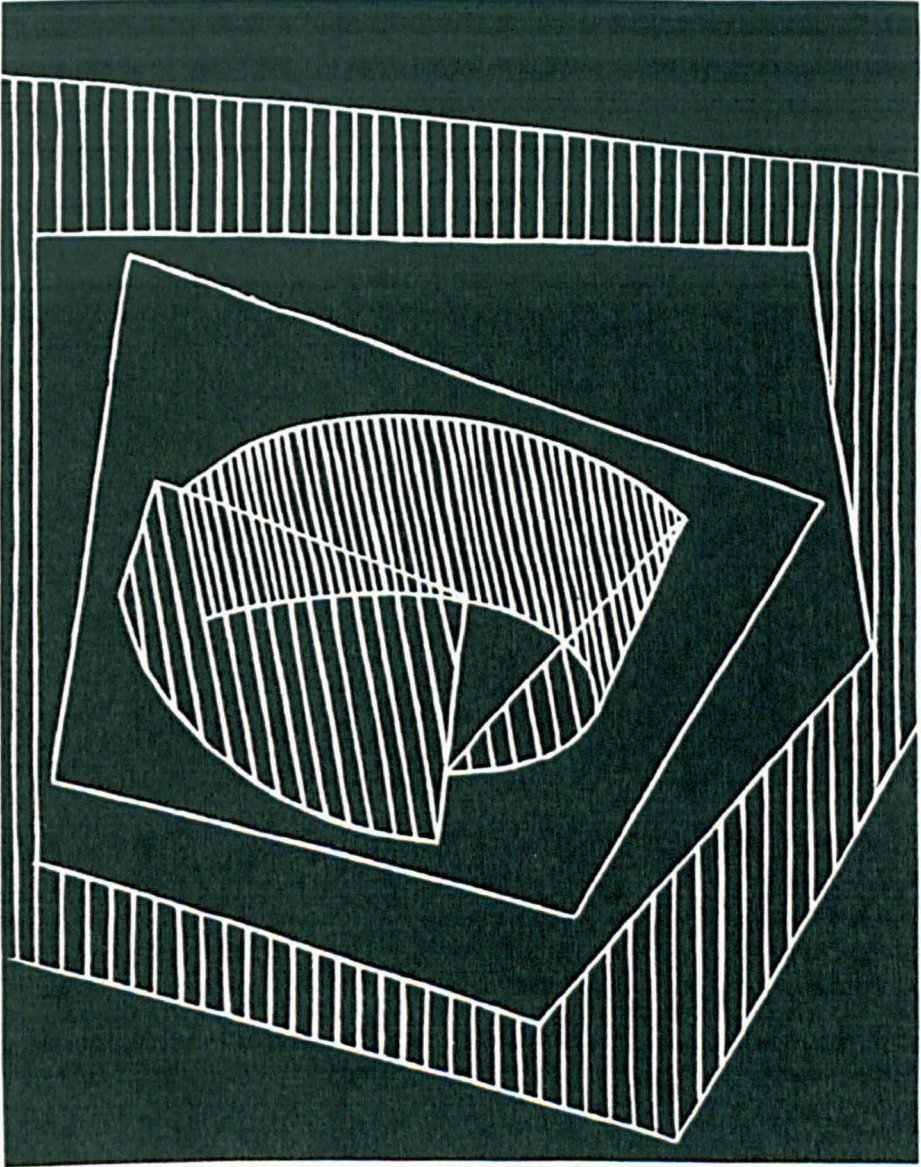


Figure 1.24a

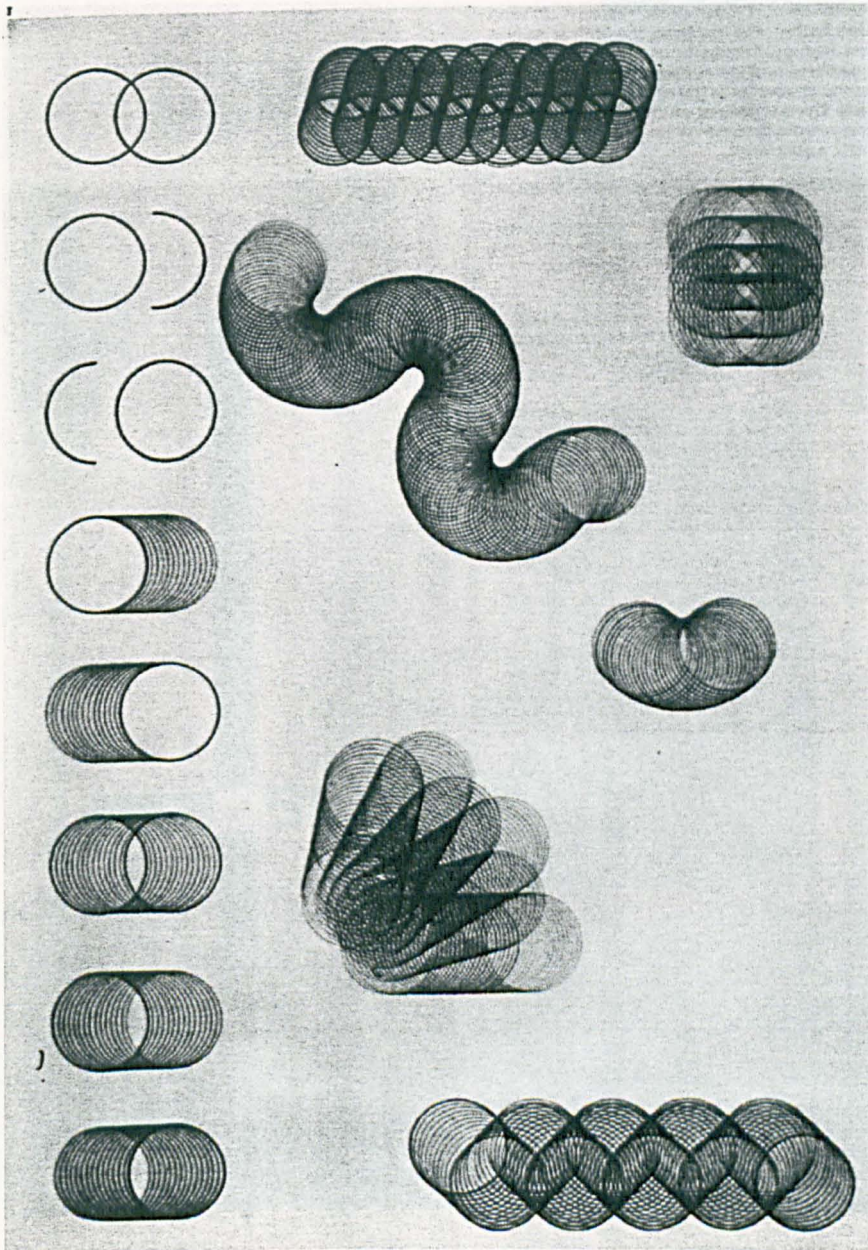


Figure 1.24b

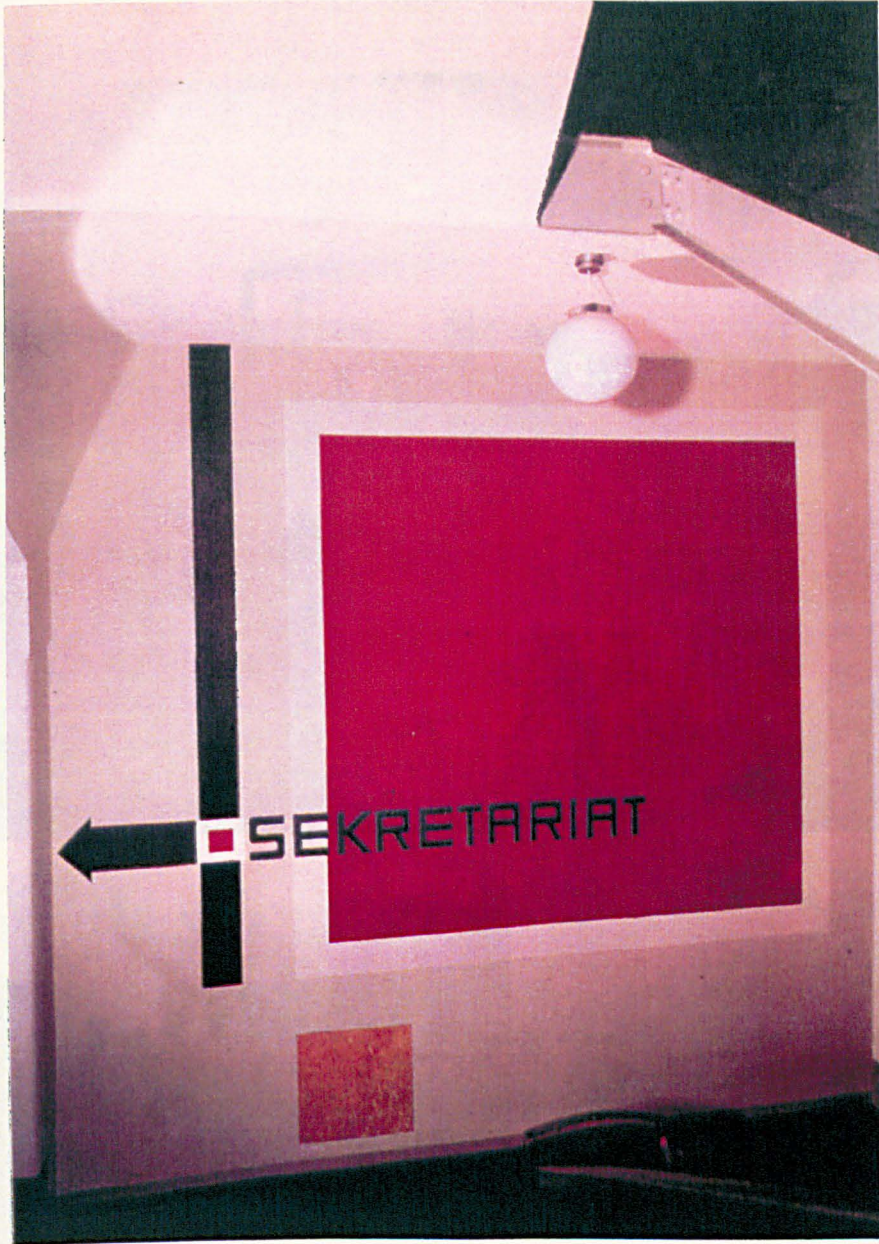


Figure 1.25

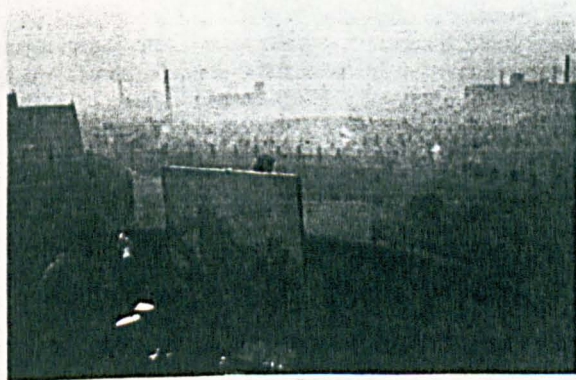
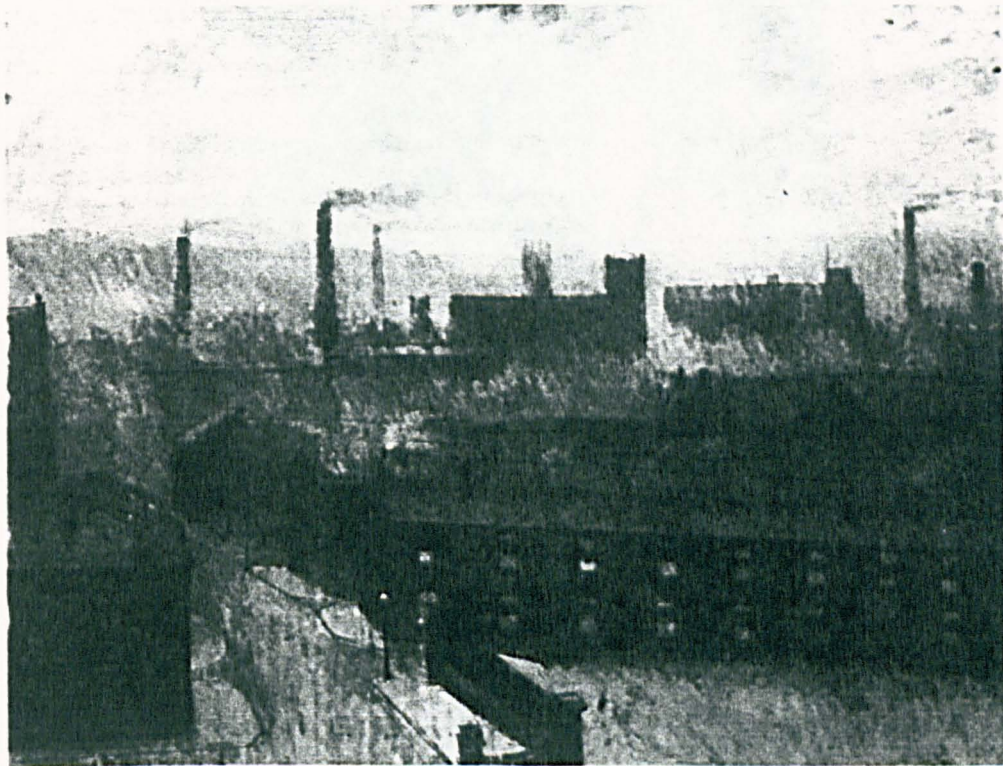


Fig. 63. William Coldstream: *Bolton* 1938. 28 1/2 x 36 in.
72 x 91.5 cm. National Gallery of Canada, Ottawa.
Fig. 64. Coldstream painting from the roof of Bolton
Art Gallery. Photograph by Humphrey Spender. By
permission of the Tom Harrison Mass Observation
Archive.

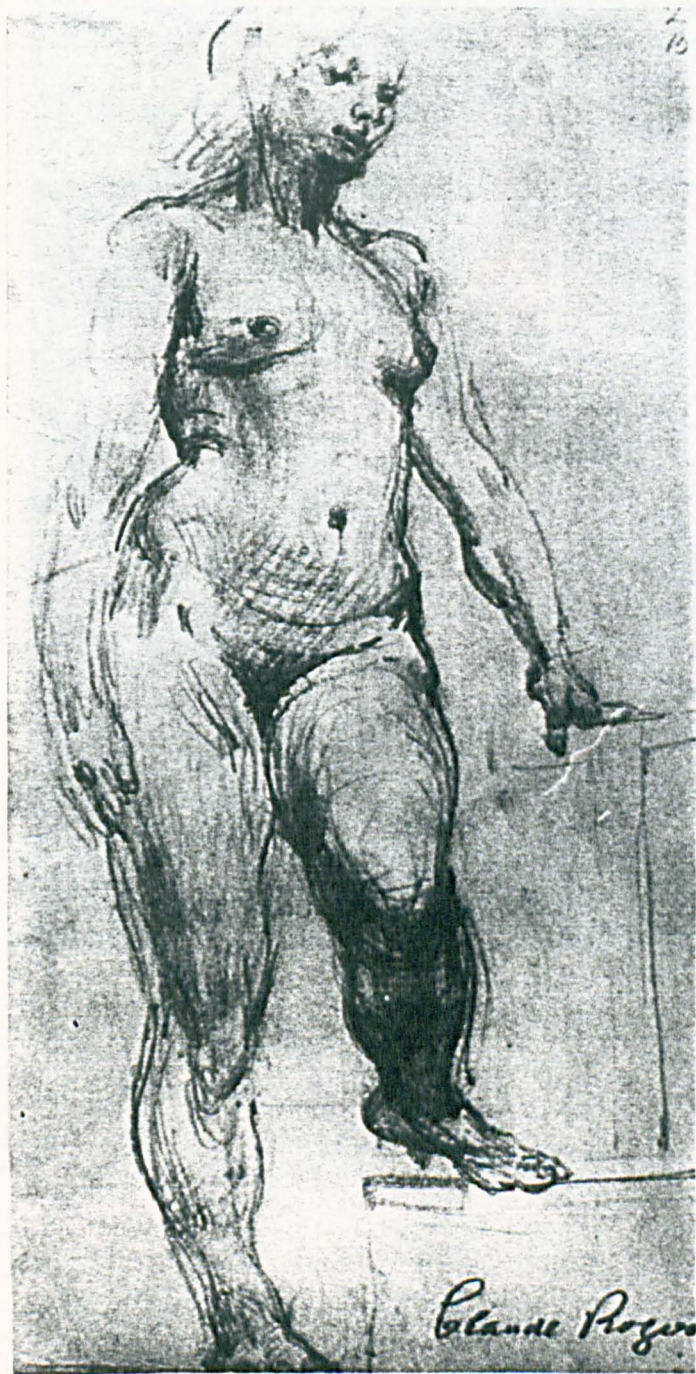


Figure 1.26a



Figure 1.27a

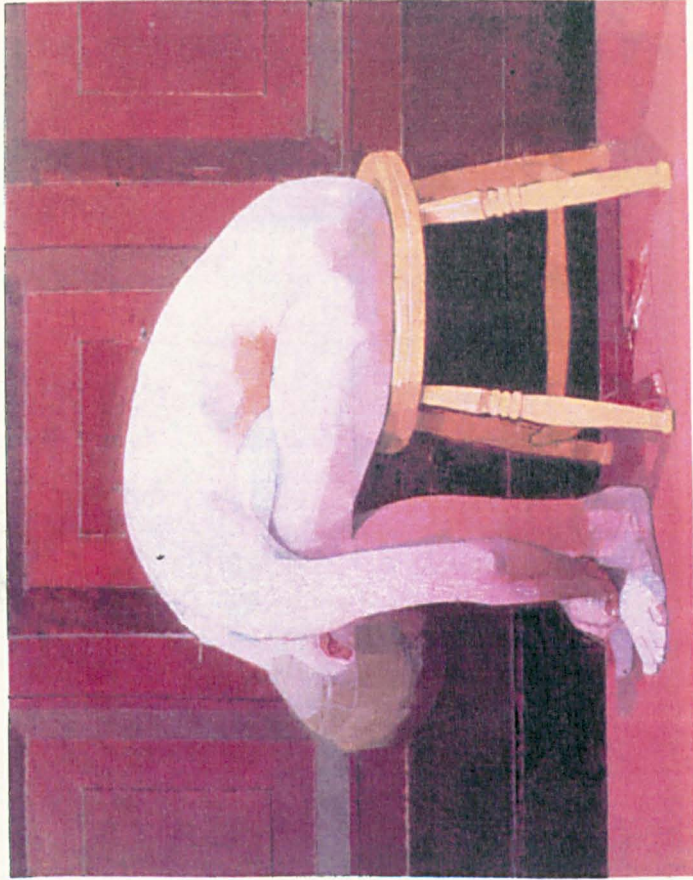


Figure 1.27b

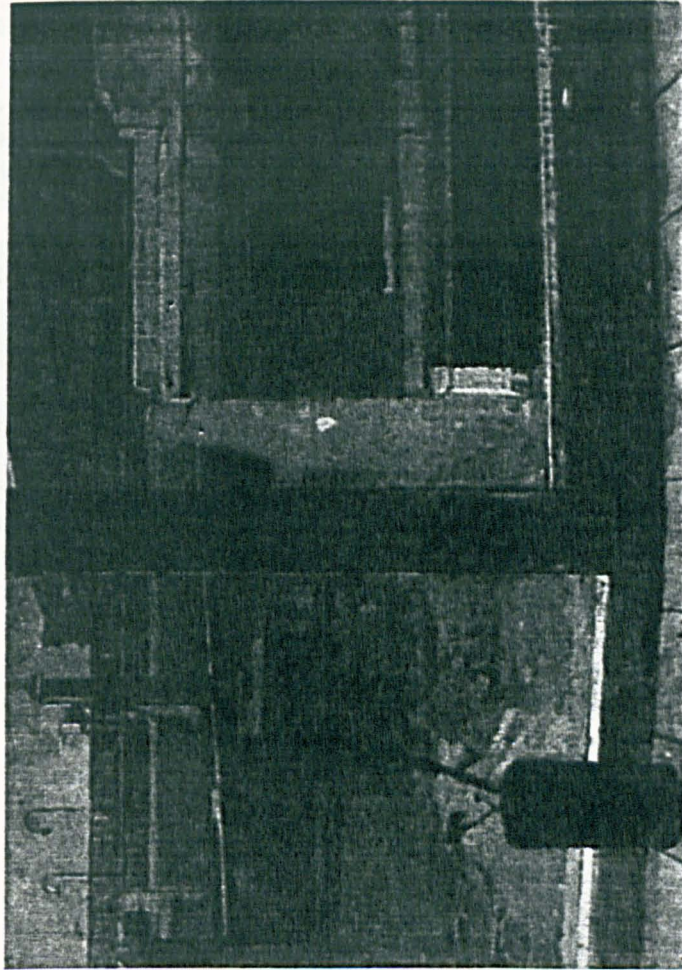


Figure 1.28



Figure 1.29



Figure 1.30a



Figure 1.30b



Figure 1.31a

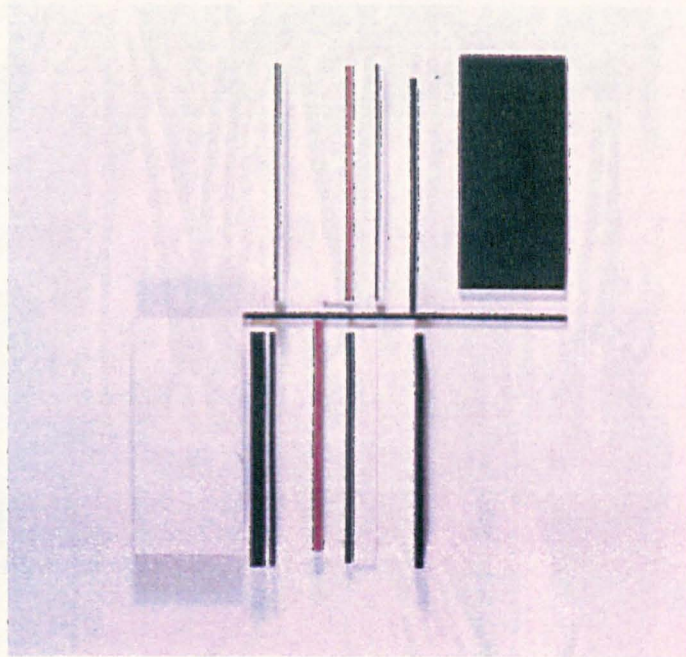


Figure 1.31b



Figure 1.32a

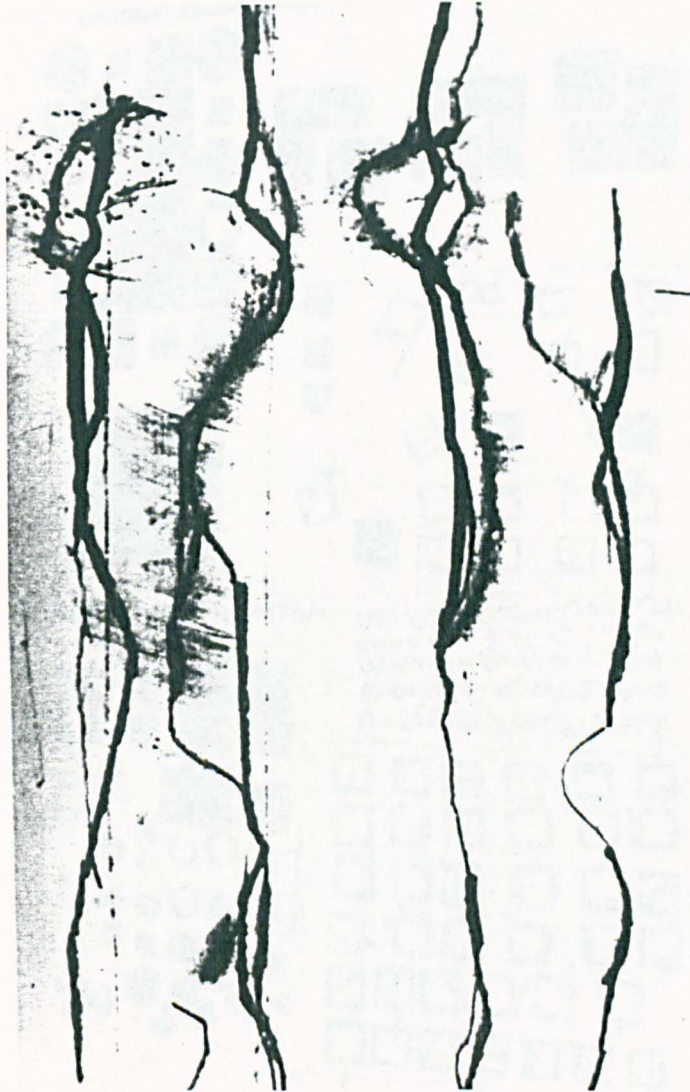


Figure 1.32b

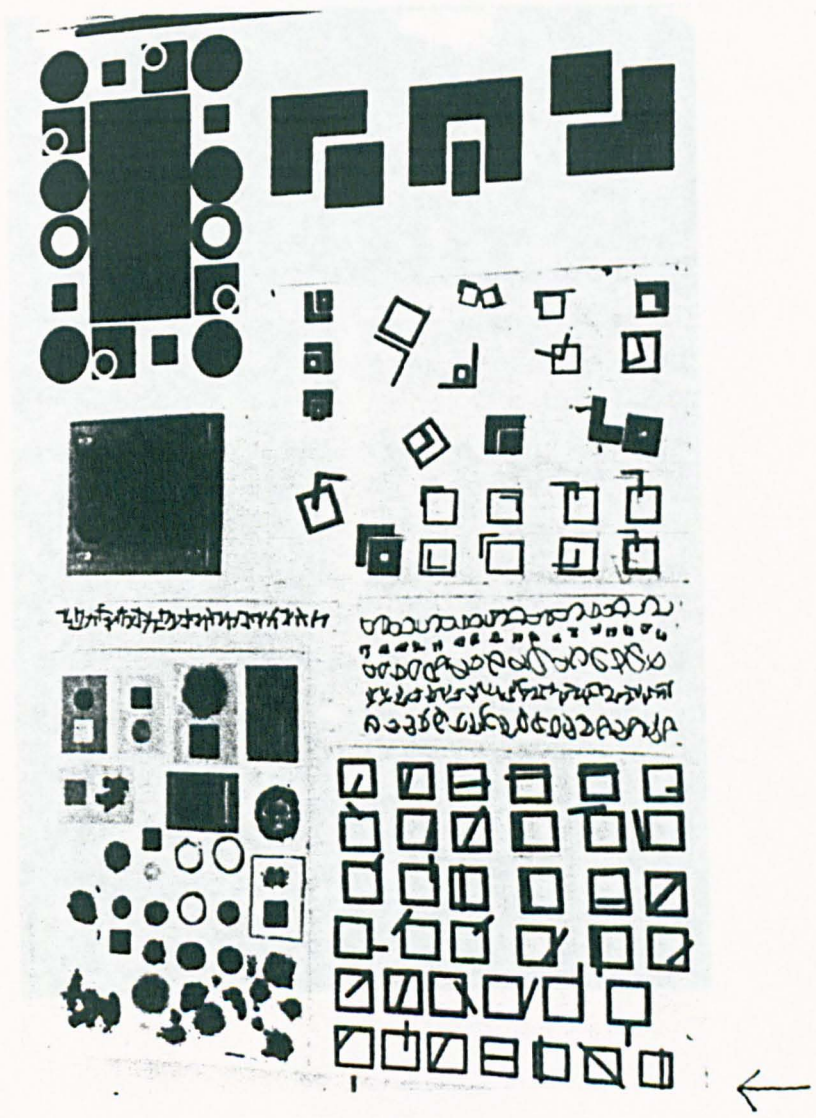


Figure 1.32c



Figure 1.33

Art-Language

Edited by Terry Atkinson, David Bainbridge
Michael Baldwin, Harold Hurrell
American Editor Joseph Kosuth

CONTENTS

Proceedings Society for Theoretical Art and Analyses	Ian Burn	
	Roger Cutforth	
	Mel Ramsden	1
Art Enquiry 2	Mel Ramsden	4
(i) Concerning Some Theories and their Worlds	Graham J. Howard	7
(ii) Mona Lisas	Graham J. Howard	9
Marshal McLuhan and the Behavioral Sciences	B. Bihari	11
A Preliminary Proposal for the Directing of Perception	Mel Ramsden	29
General Note: M. Baldwin		
(i) Atkinson and Meaninglessness		30
(ii) Preface		30
(iii) Dead Issues		31

Art-Language is published three times a year by
Art & Language Press, 26 West End, Chipping Norton, Oxon.,
England, to which address all mss and letters should be sent.

Price 12s.6d. U.K. \$2.50 USA All rights reserved

Willis & Company Printers Limited, Industrial Estate, Platts Common, Barnsley, Yorkshire



Figure 1.35

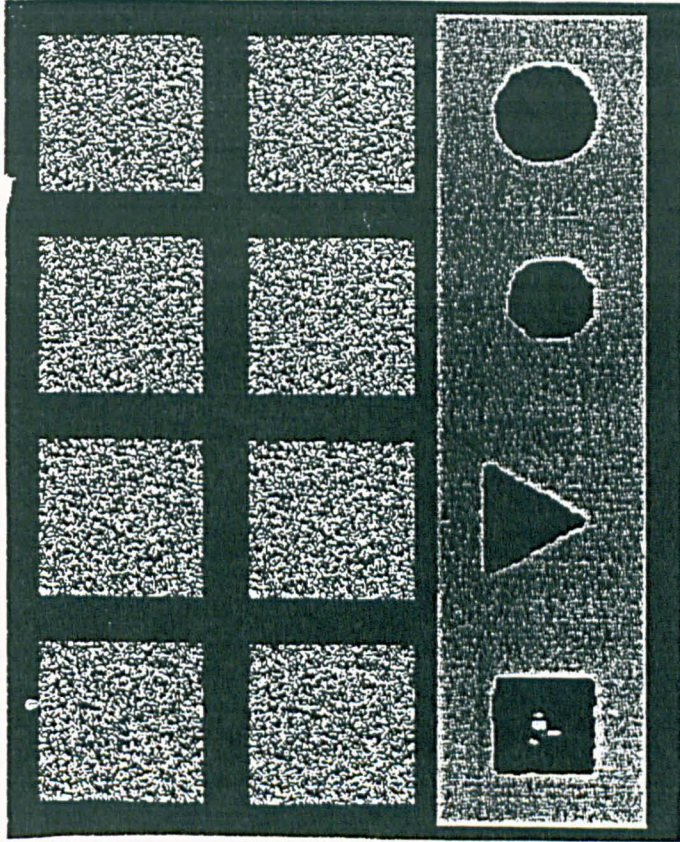
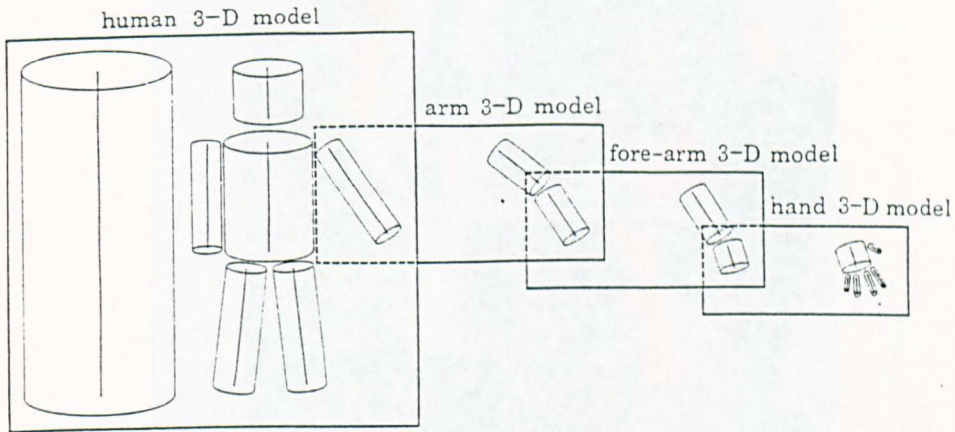


Figure 2.6



This diagram illustrates the organization of shape information in a 3-D model description. Each box corresponds to a 3-D model; with its model axis on the left side of the box and the arrangement of its component axes shown on the right side. In addition some component axes have 3-D models associated with them and this is indicated by the way the boxes overlap. The relative arrangement of each model's component axes, however, is shown improperly since it should be in an object-centred system rather than the viewer-centred projection used here (a more correct 3-D model is shown in figure 5). The important characteristics of this type of organization are: (i) each 3-D model is a self-contained unit of shape information and has a limited complexity, (ii) information appears in shape contexts appropriate for recognition (the disposition of a finger is most stable when specified relative to the hand that contains it), and (iii) the representation can be manipulated flexibly. This approach limits the representation's scope however, since it will only be useful for shapes that have well defined 3-D model decompositions.

Figure 2.7



Figure 3.1

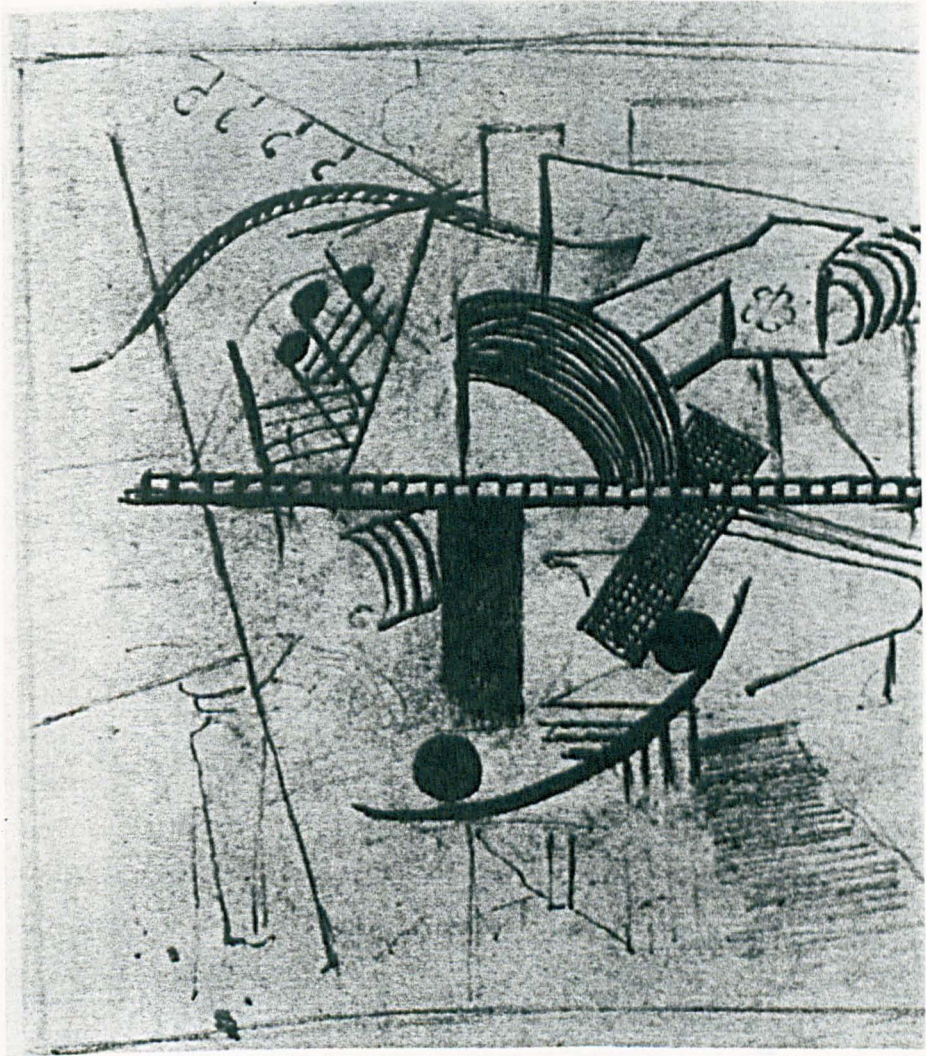


Figure 3.1a

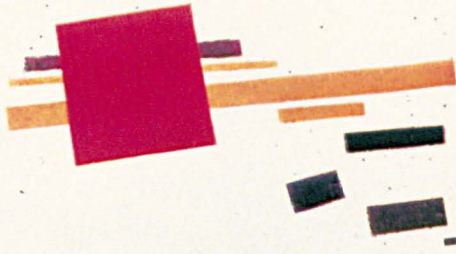
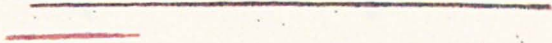
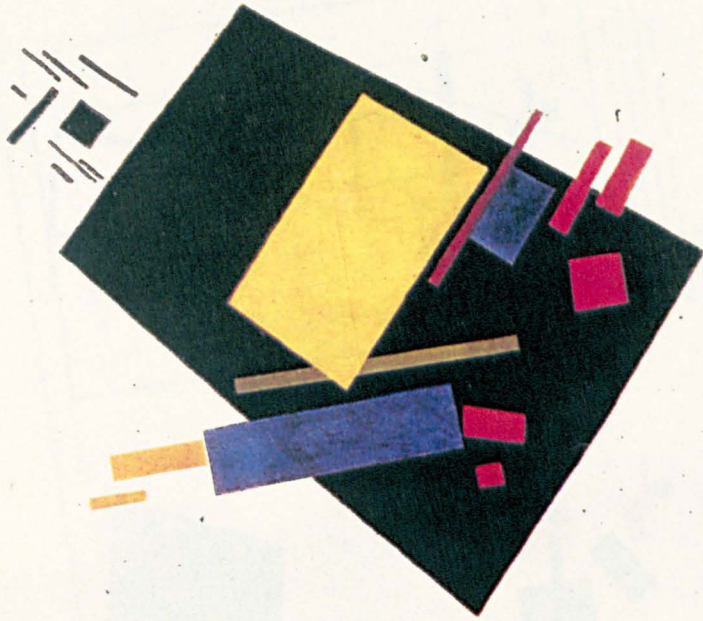
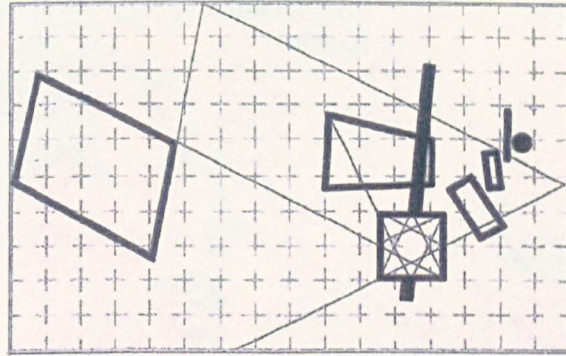


Figure 3. 2



226. left, Karamat Malayish Suprematism (Penger) *Reborn of a form*.
 Adfa, *Chakra Mala* in *East Indonesian*, 1915. Oil on canvas, 16 x 24
 centim. (London: British Council, 8.5 x 7.12 x 44.85 cm; given as 70 x
 44 cm). National Museum, Amsterdam. Exhibited at O.M.F.,
 Pempang, 1915.

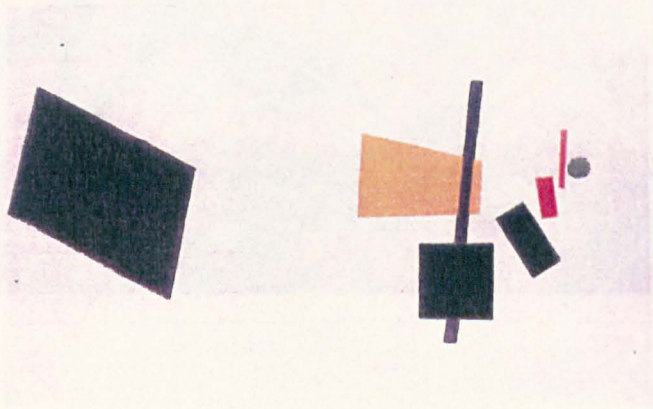


Figure 3.3



Figure 3.4

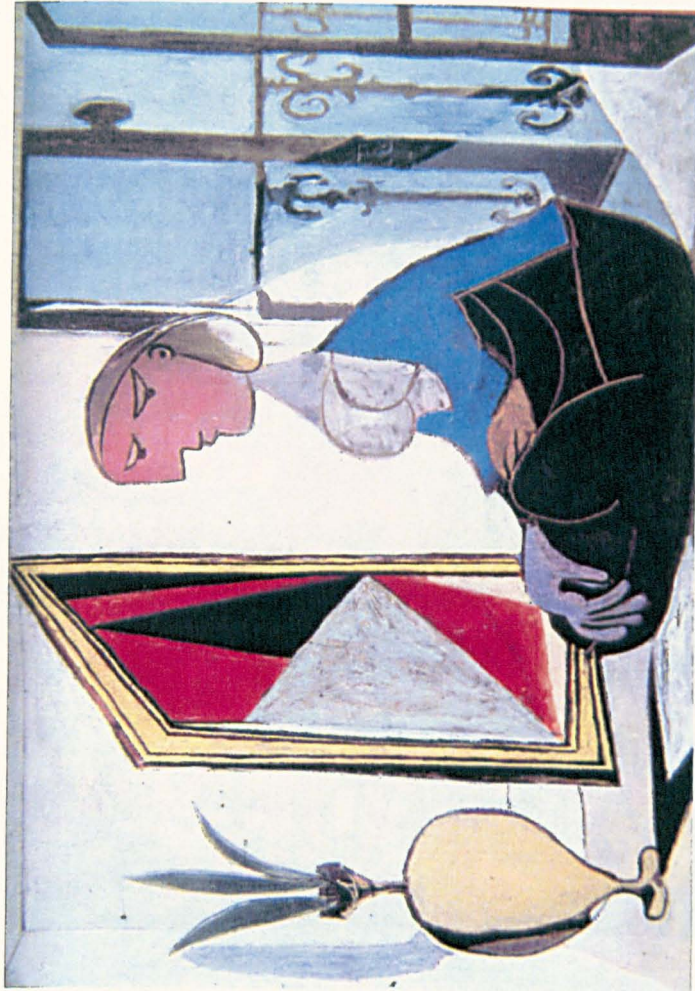


Figure 4.10



Figure 4.11



Figure 4.12



Figure 4.13



Figure 4.14



Ceci n'est pas une pipe.



Figure 4.19

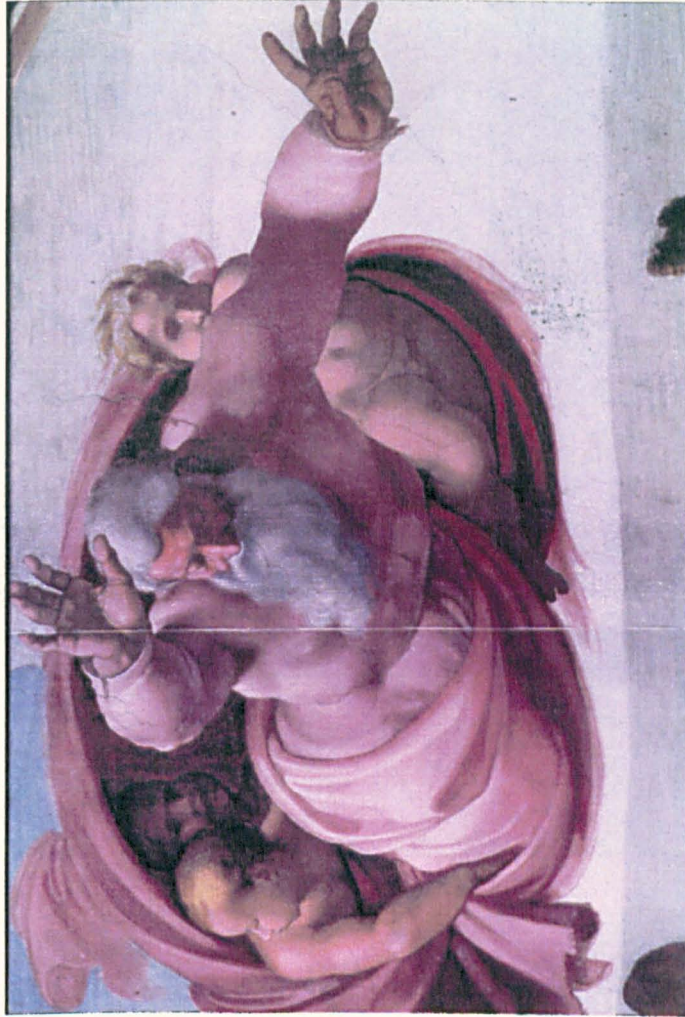


Figure 4.21



Figure 4.23

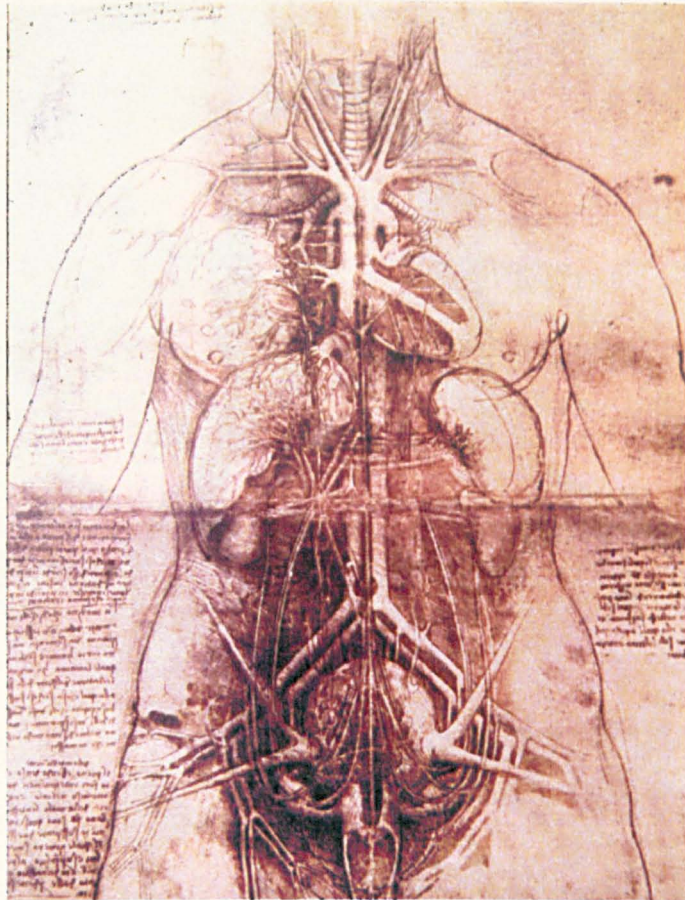


Figure 4.24



Figure 4.25

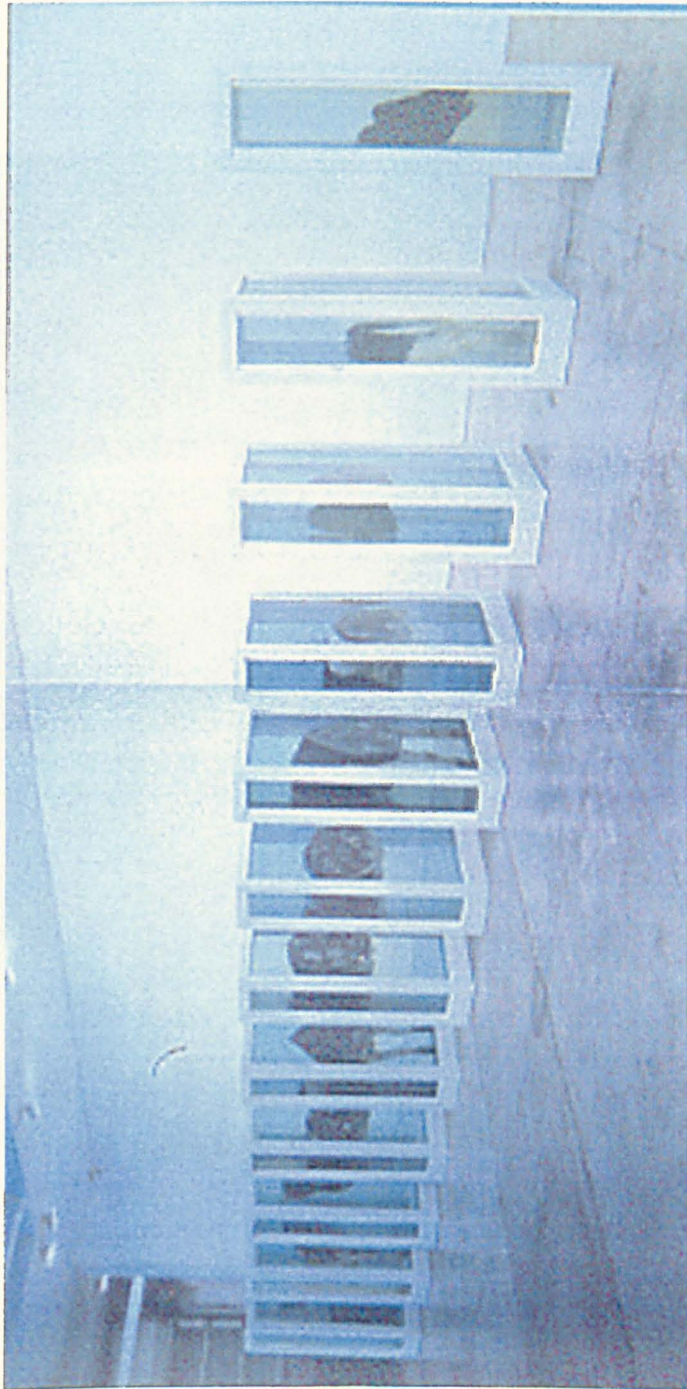


Figure 4.26

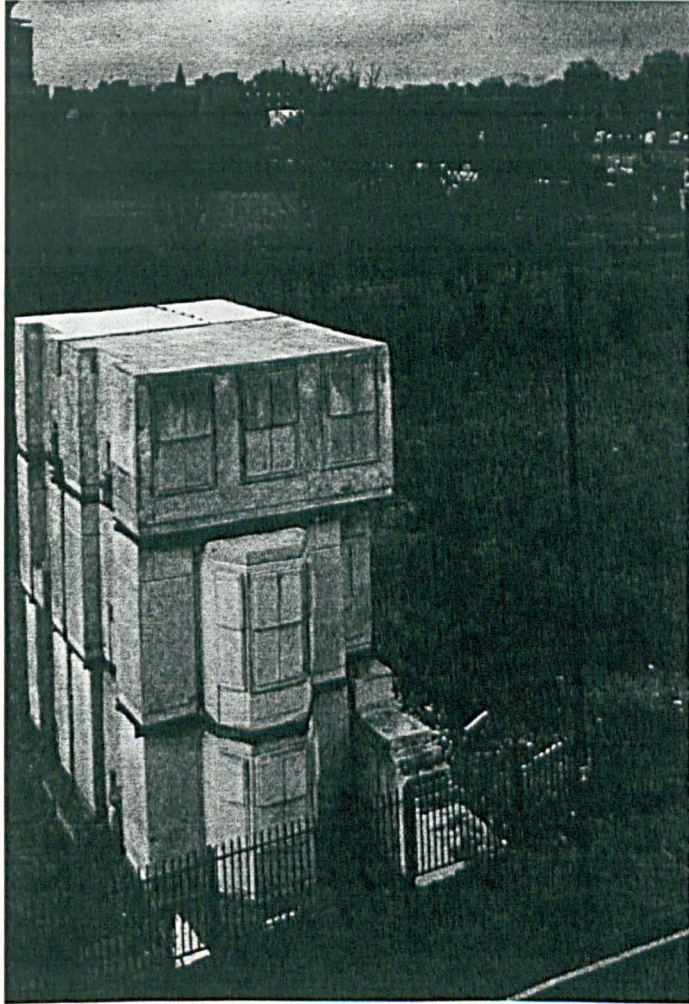


Figure 4.27

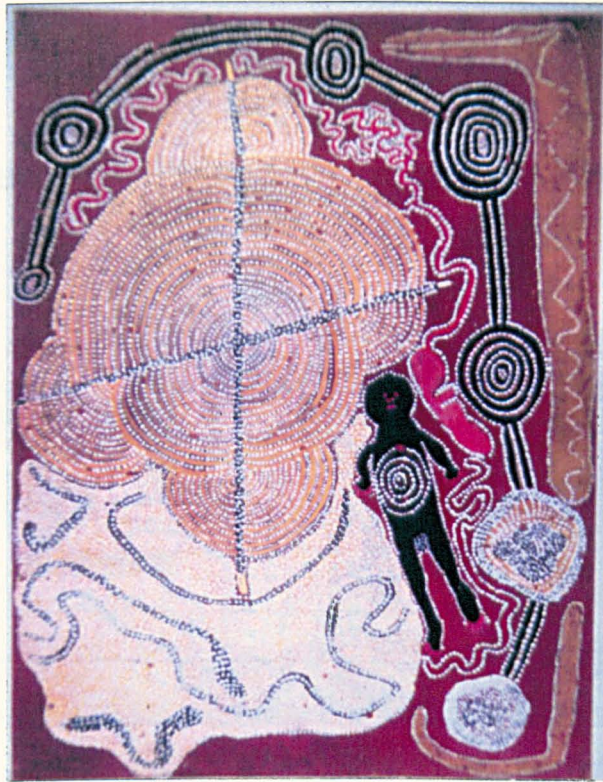


Figure 4.30

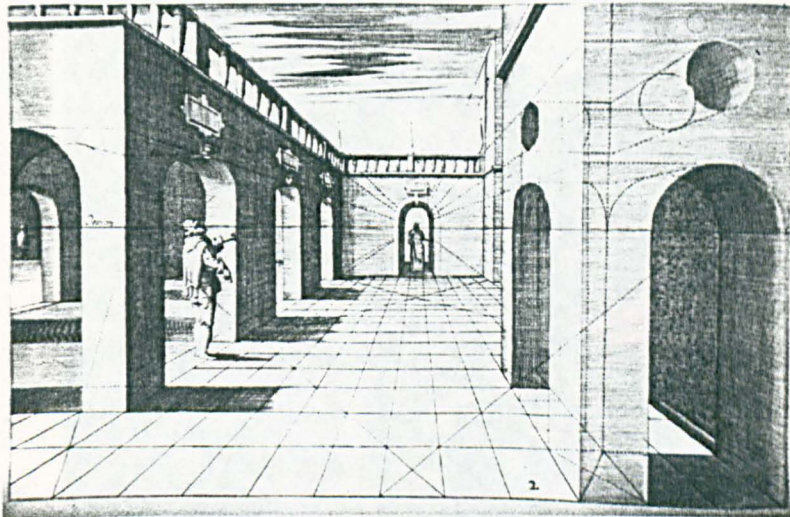


Figure 4.31

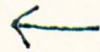
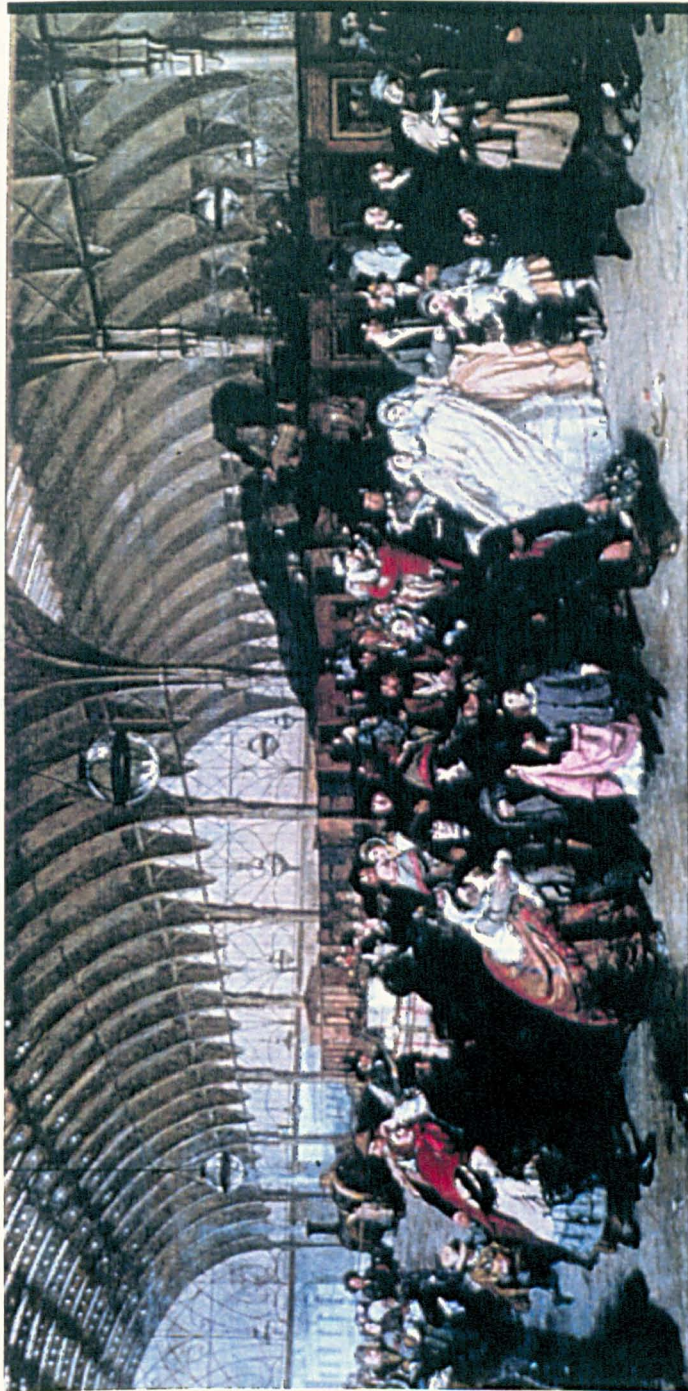


Figure 4.33



Figure 4.34



Figure 4.35



Figure 4.36



Figure 4.37

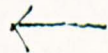
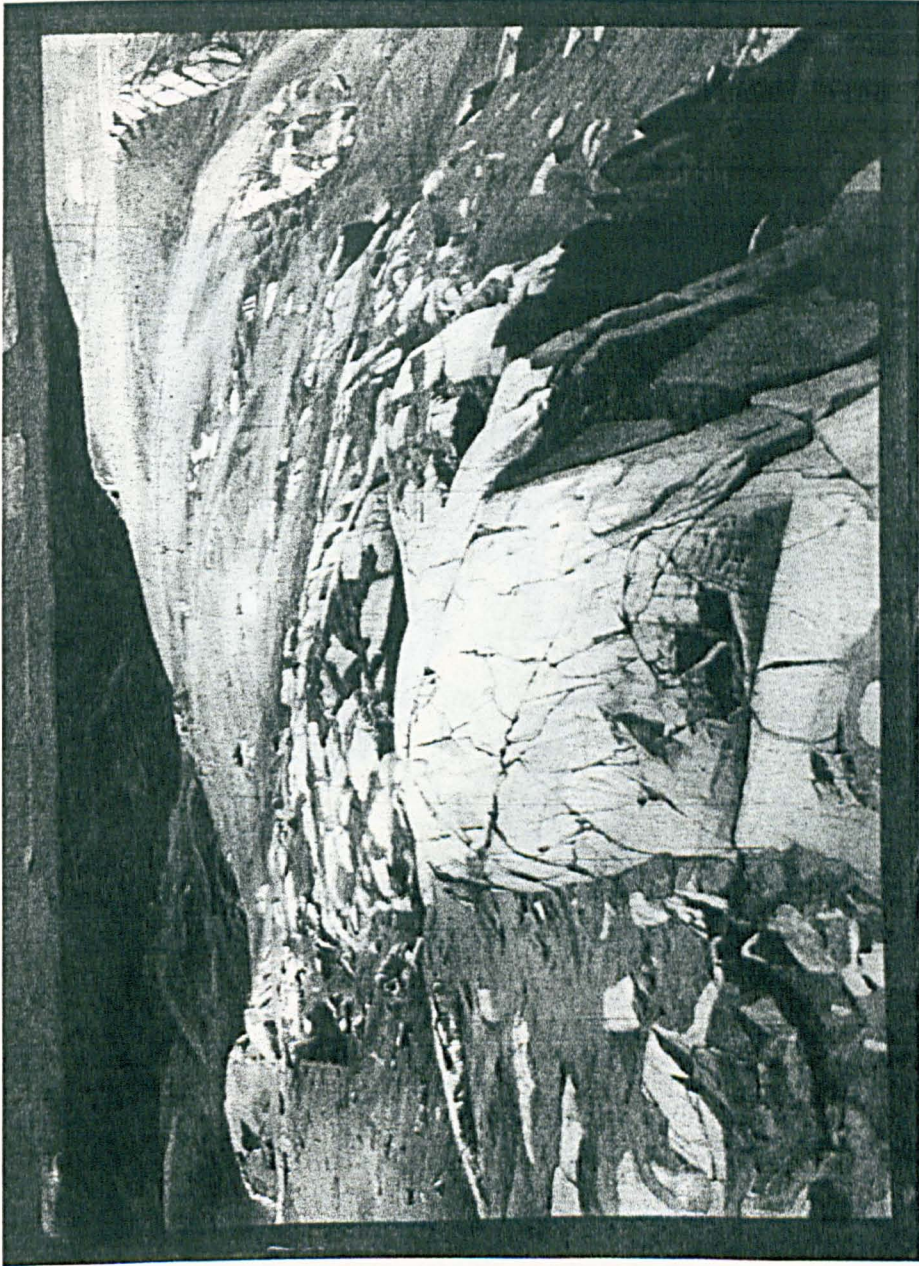
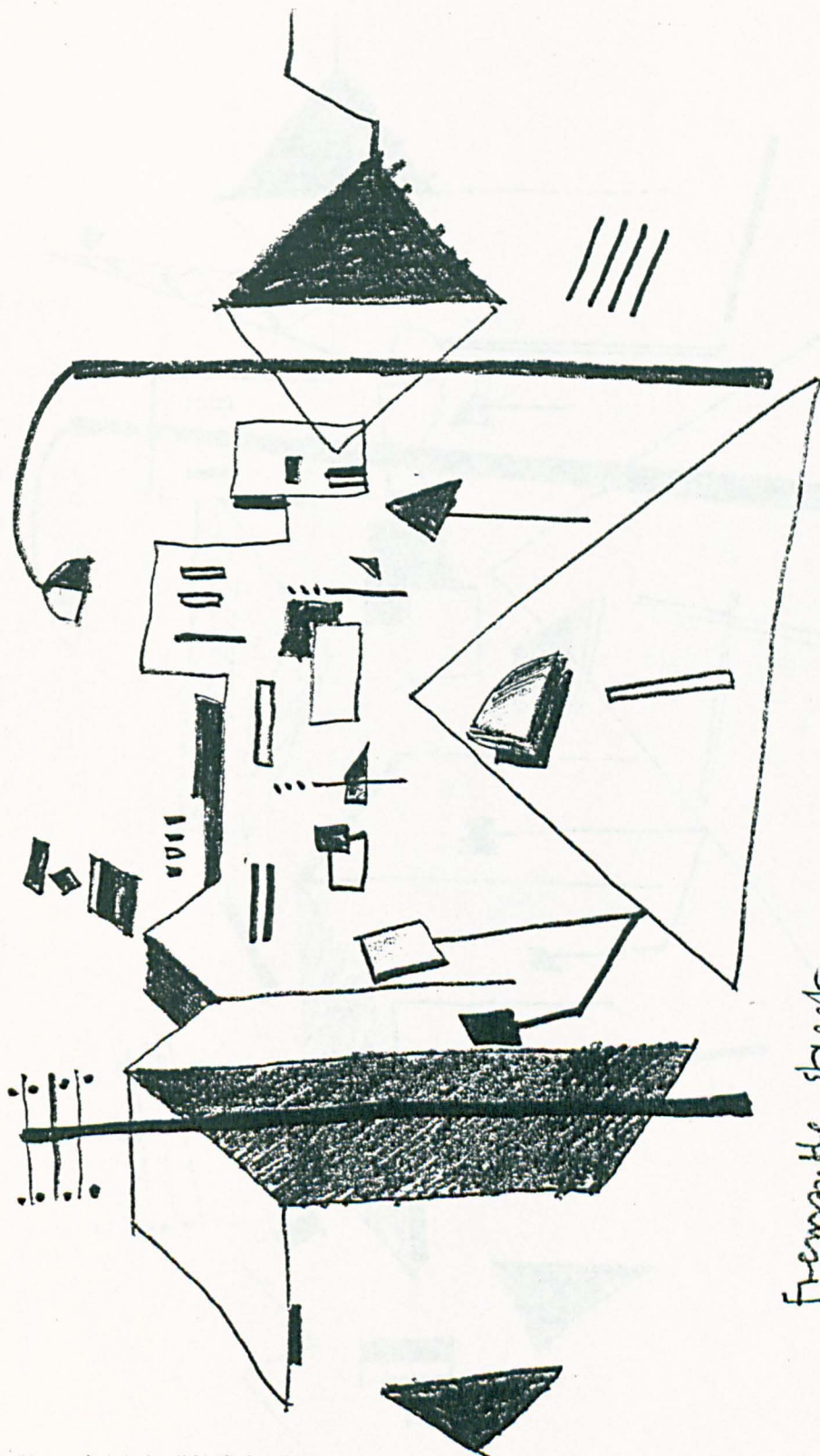


Figure 4.37a



Figure 4.38

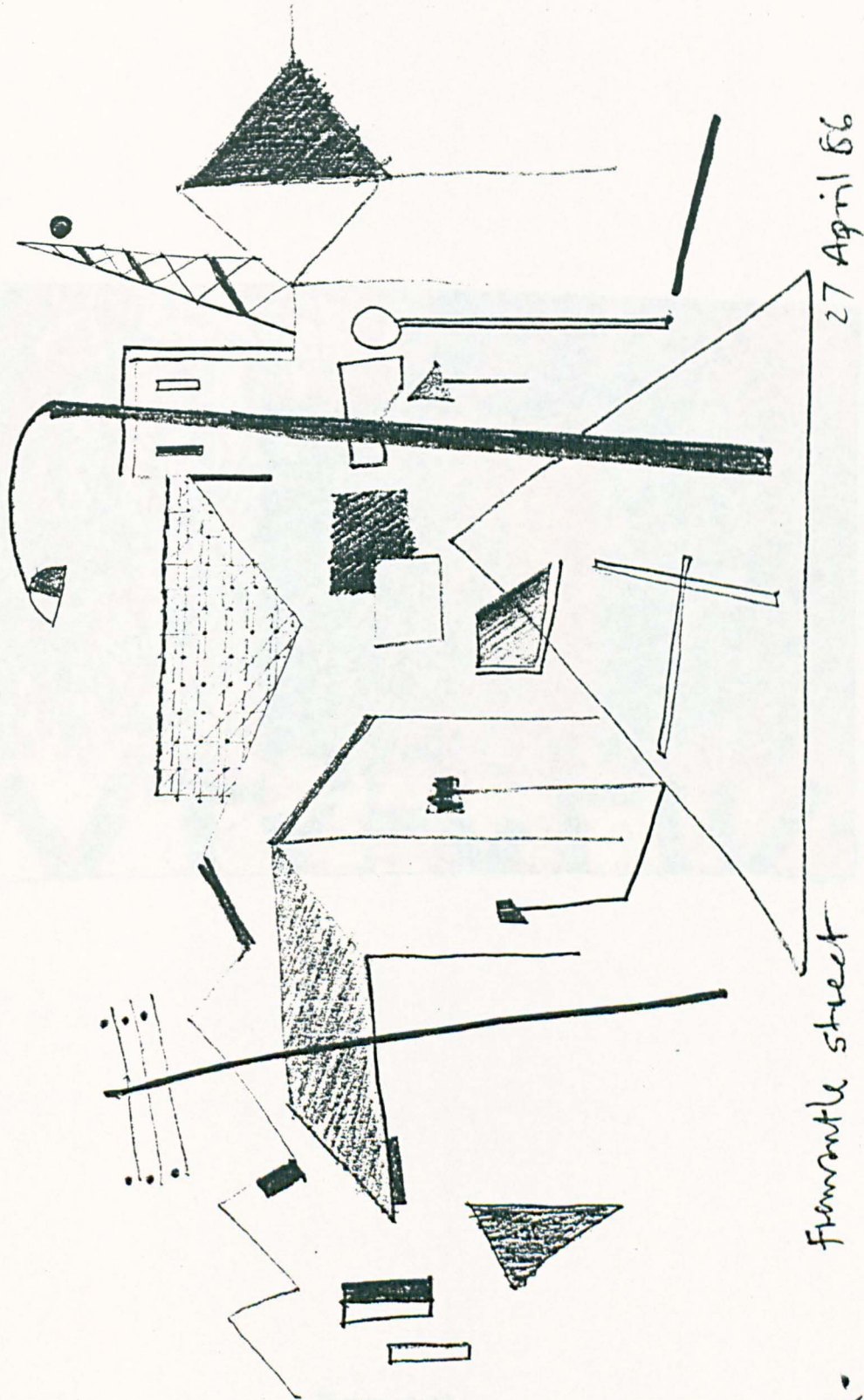


27 April 86

Fremantle street



Figure 4.39



27 April 86

Framantle street



Figure 4.39a



Figure 4.40



Figure 4.40a

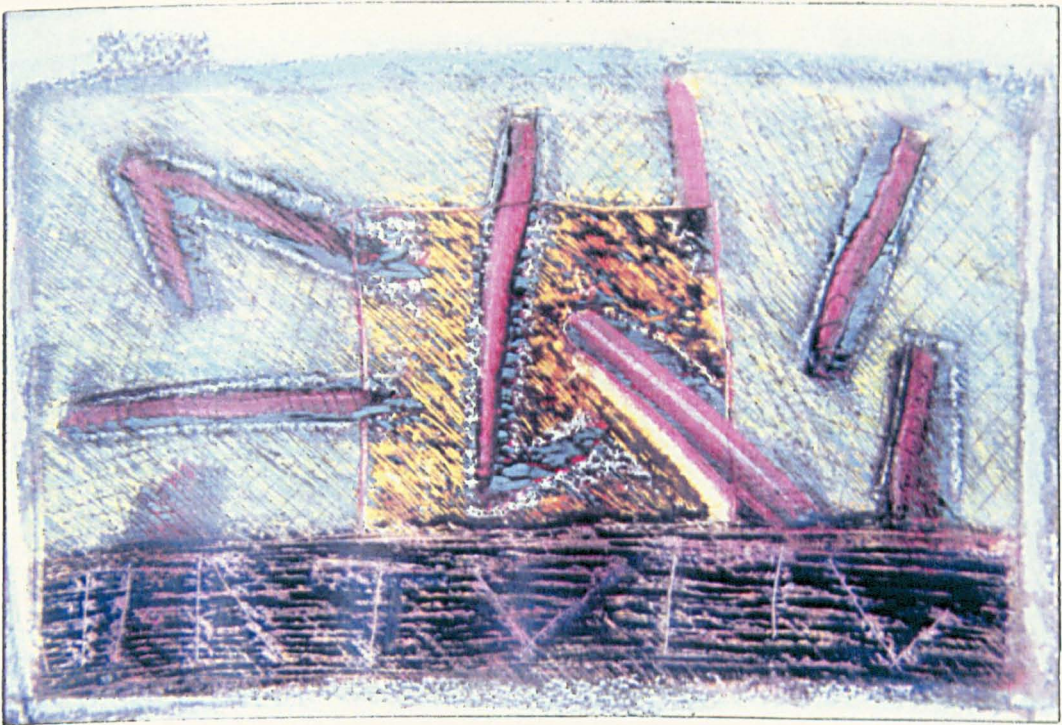


Figure 4.40b



Figure4.40c



Figure 5.6

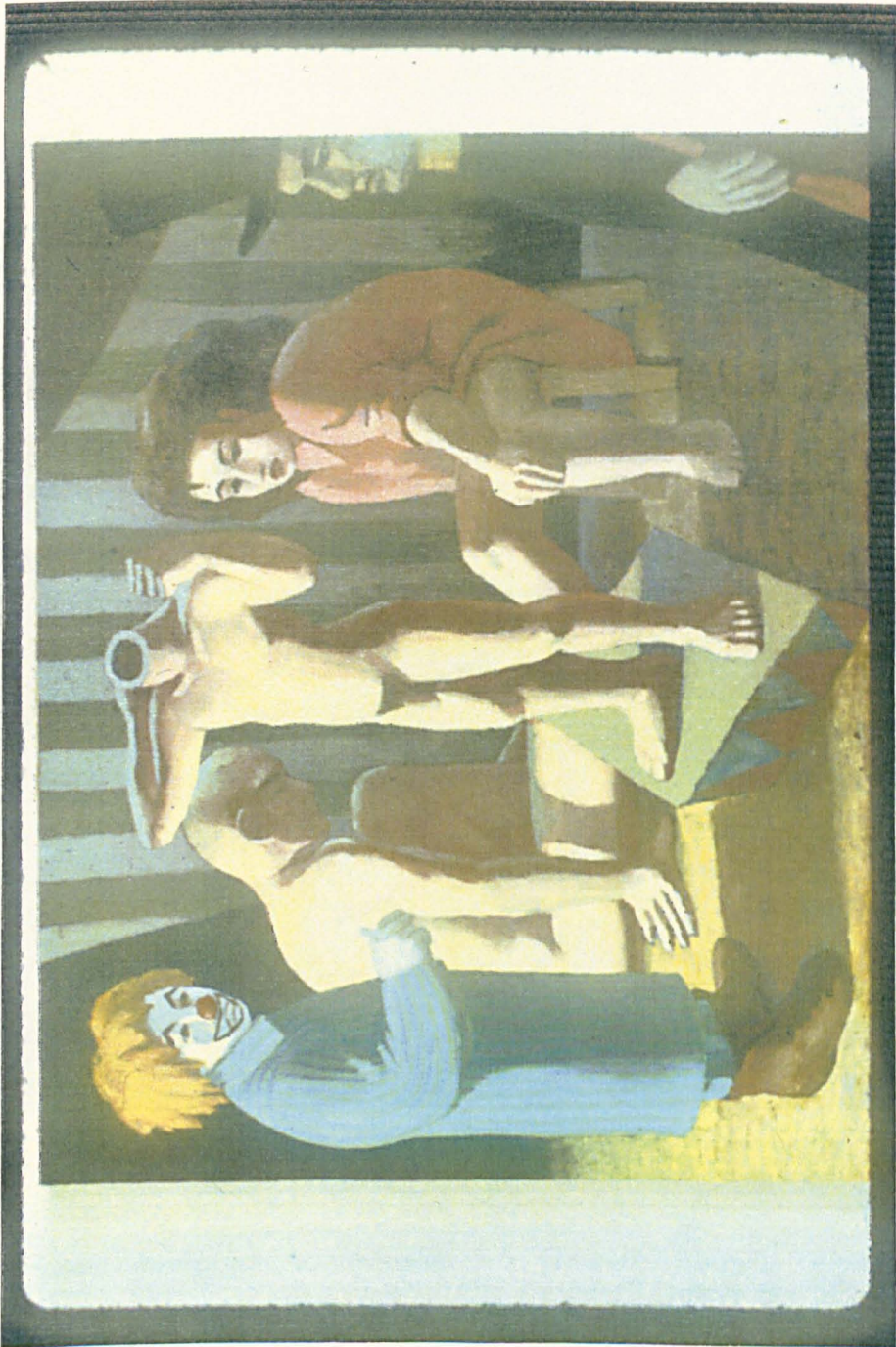


Figure 5.6a

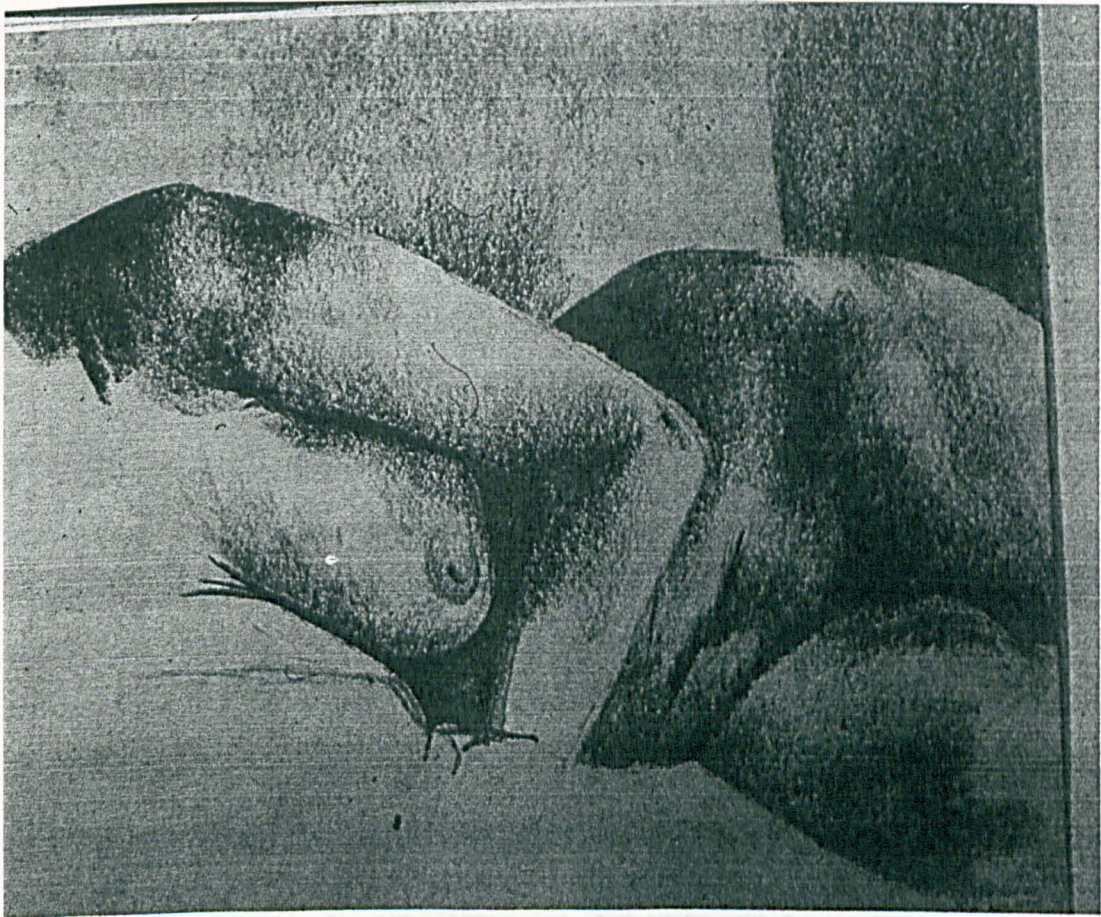


Figure 5.7

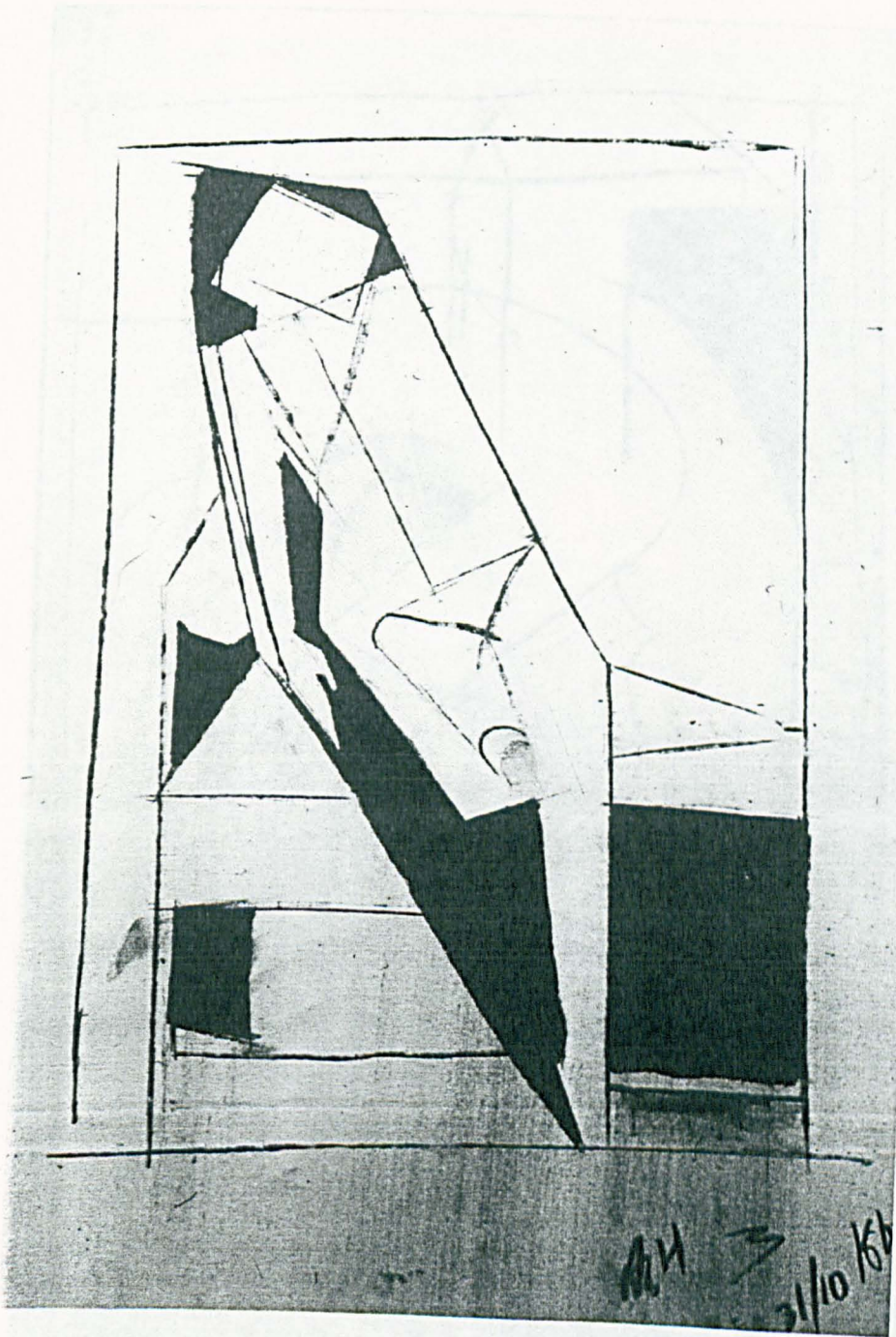


Figure 5.8

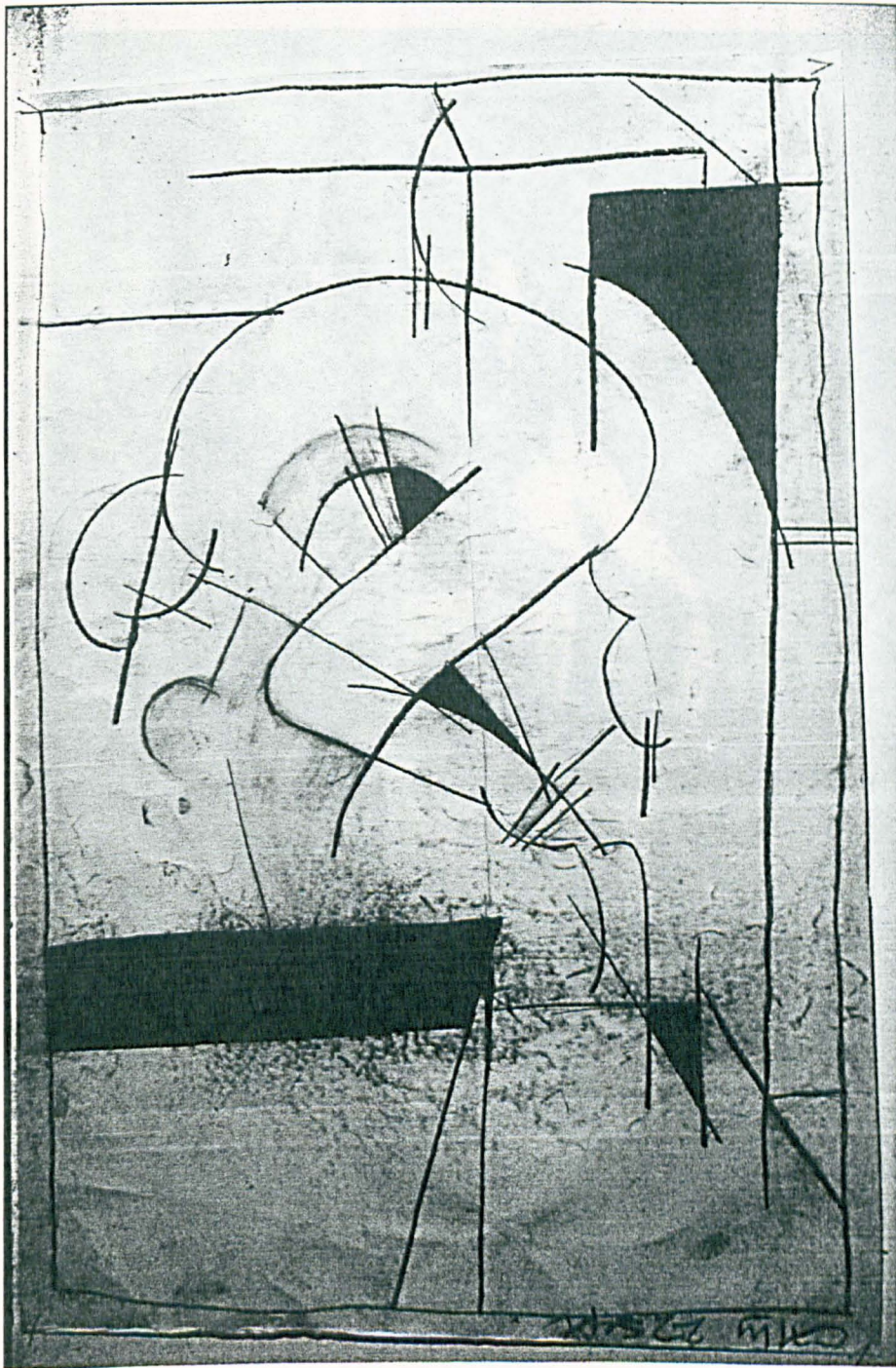


Figure 5.9



Figure 5.10



Figure 5.11



Figure 5.12

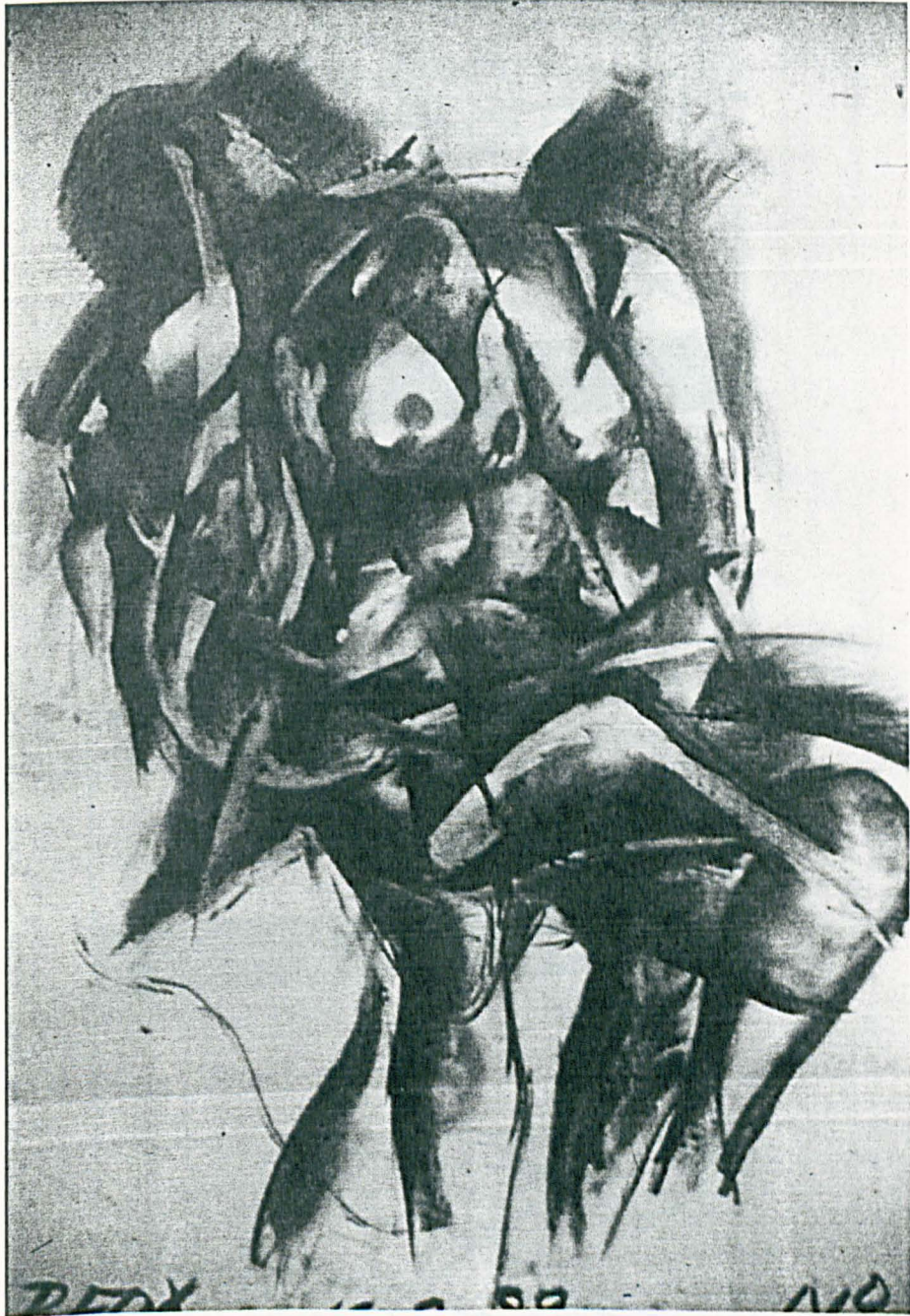


Figure 5.13

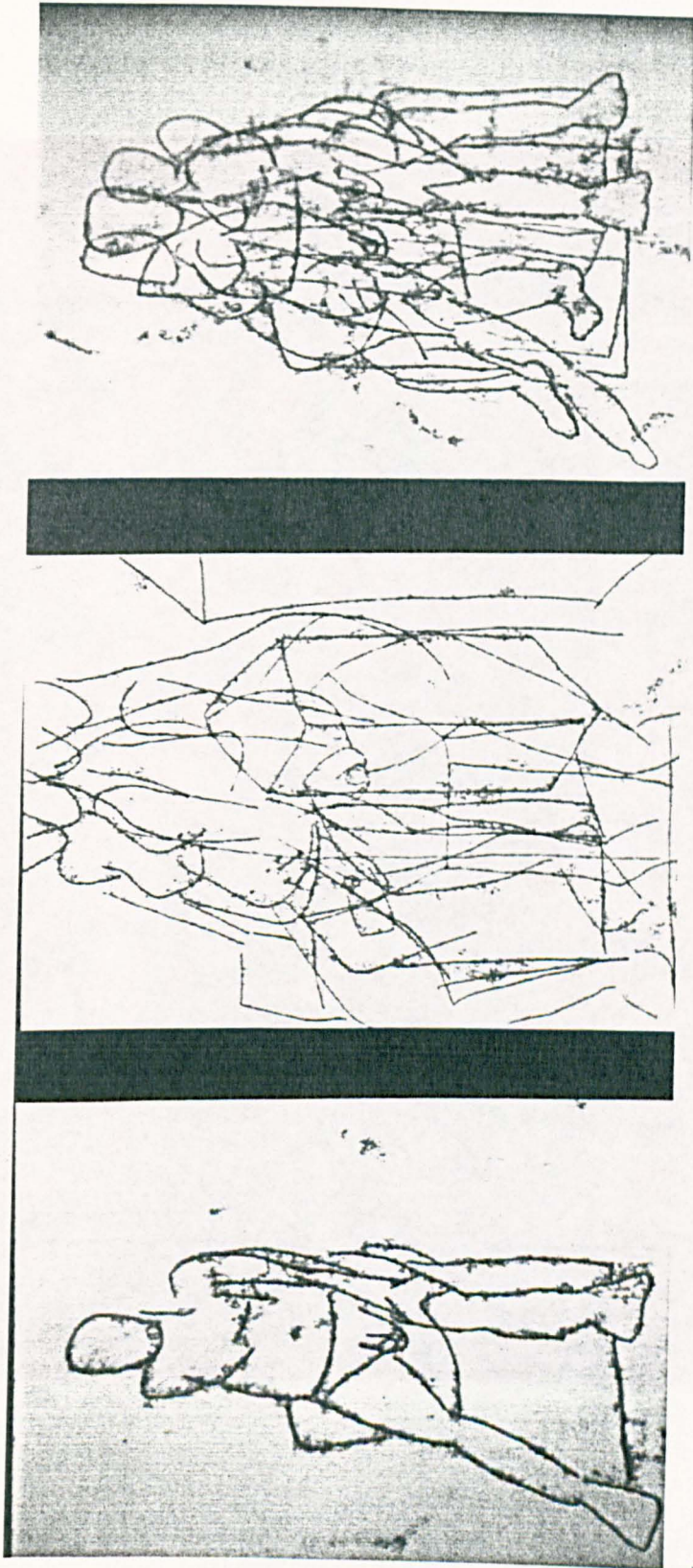


Figure 5.14

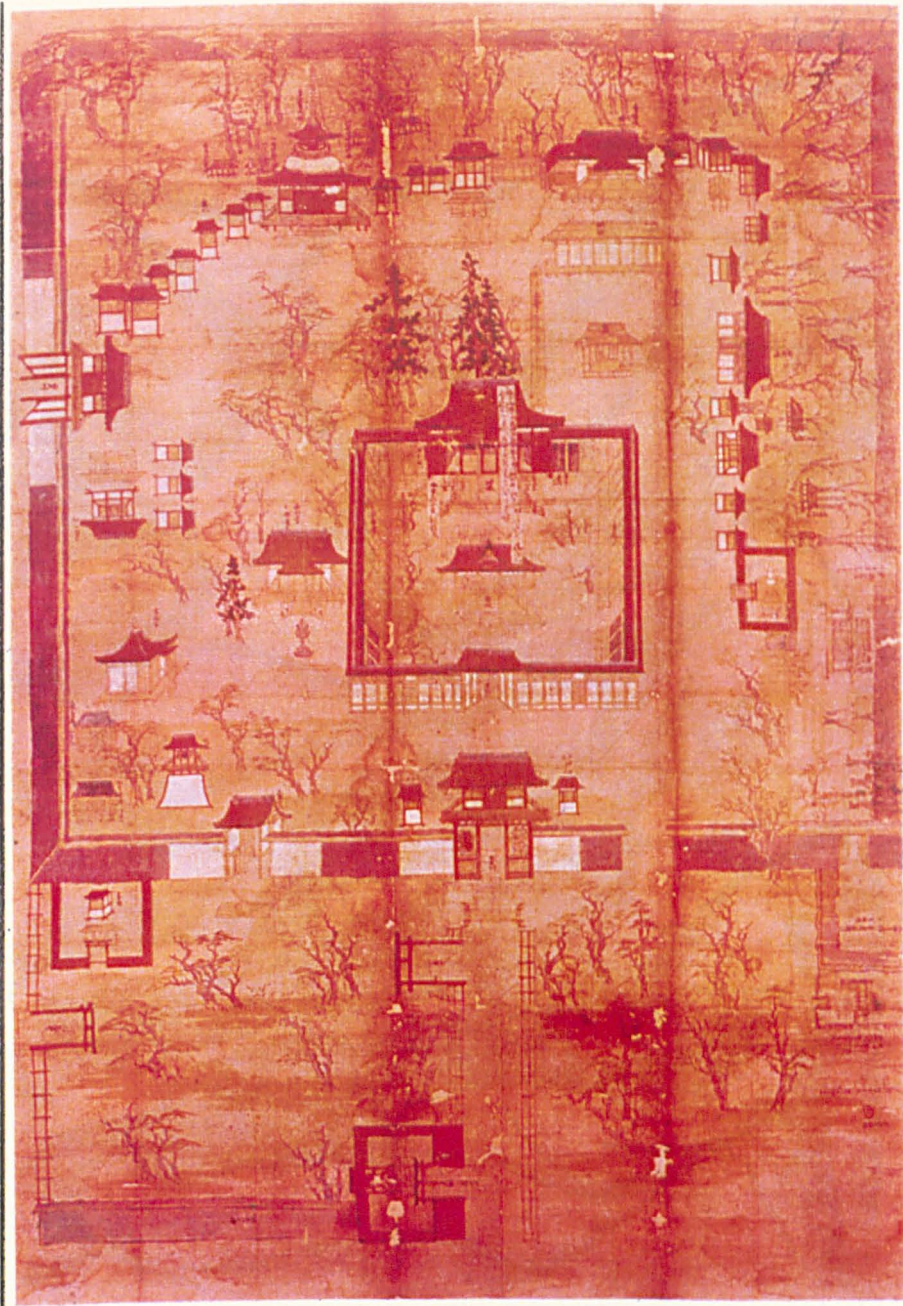


Figure 5.15



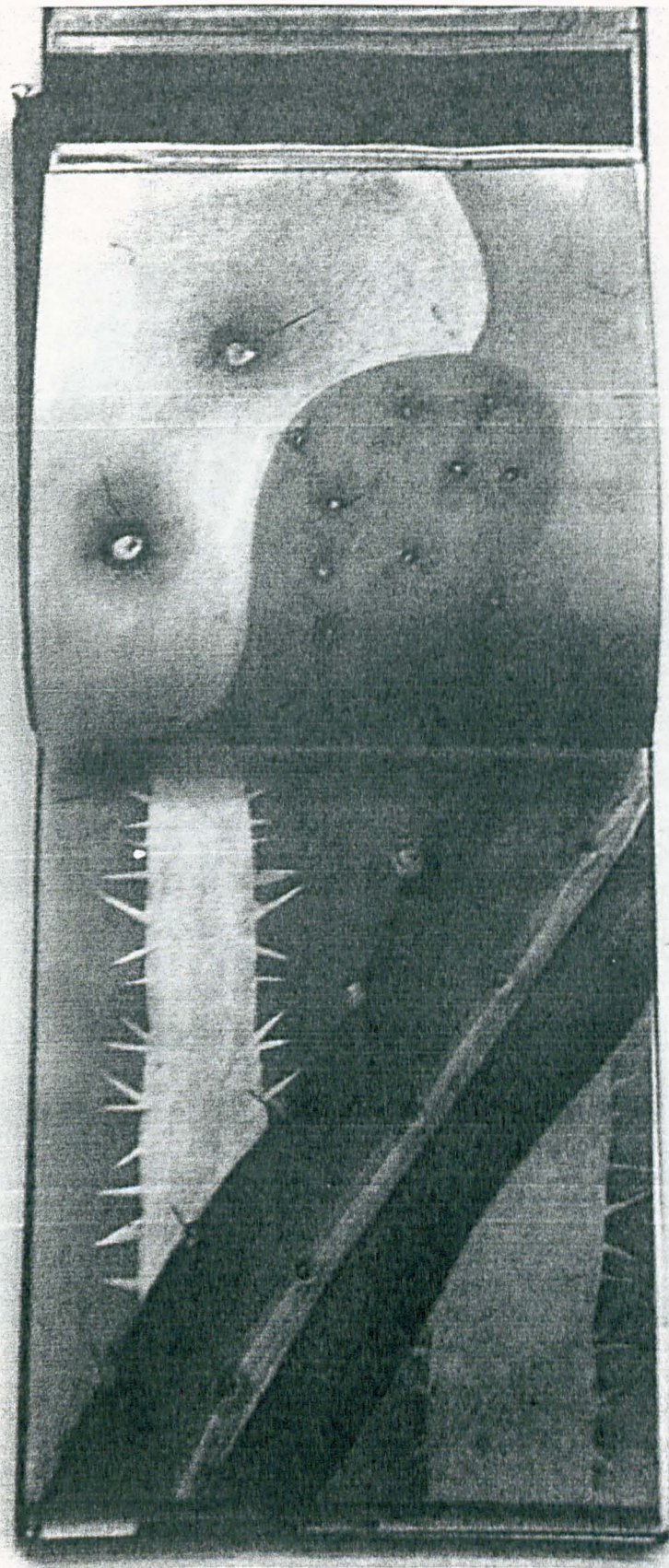
Figure 5.16



Figure 5.17



Figure 5.18



Sketchbook 77 (80) - 10006 (6) (10/1)

Figure 5.19

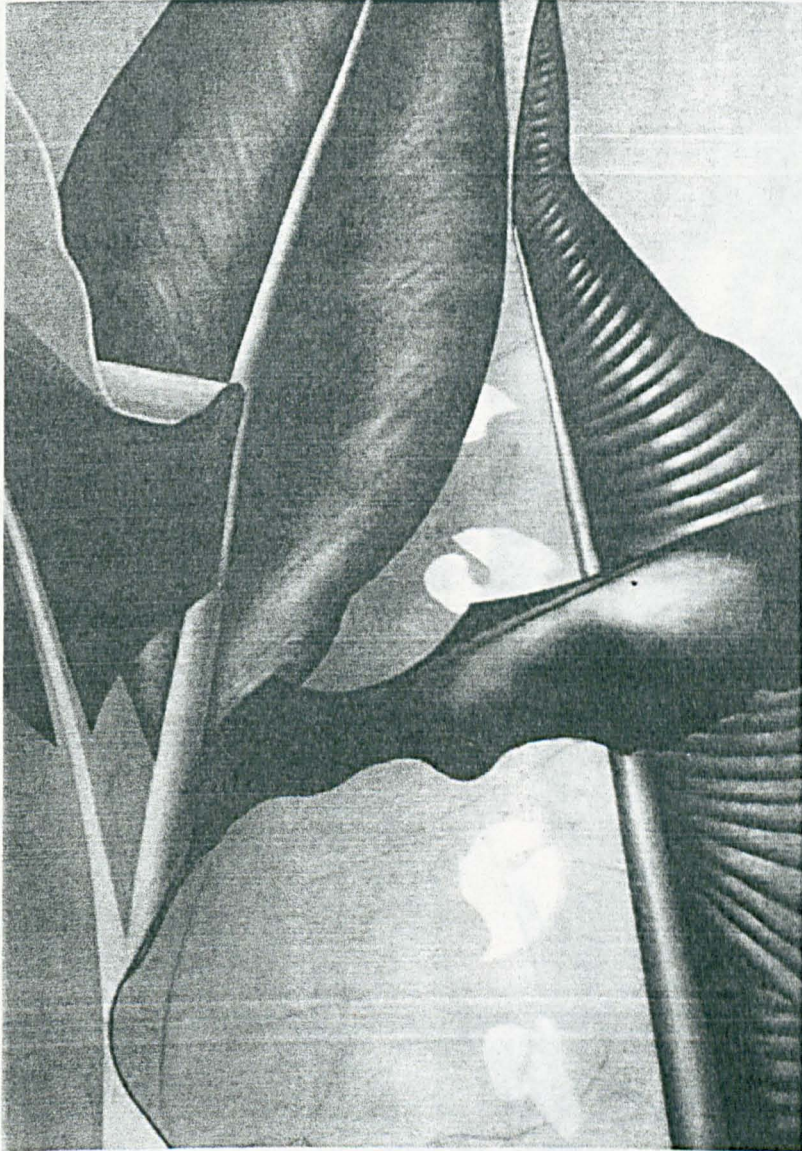


Figure 5.20

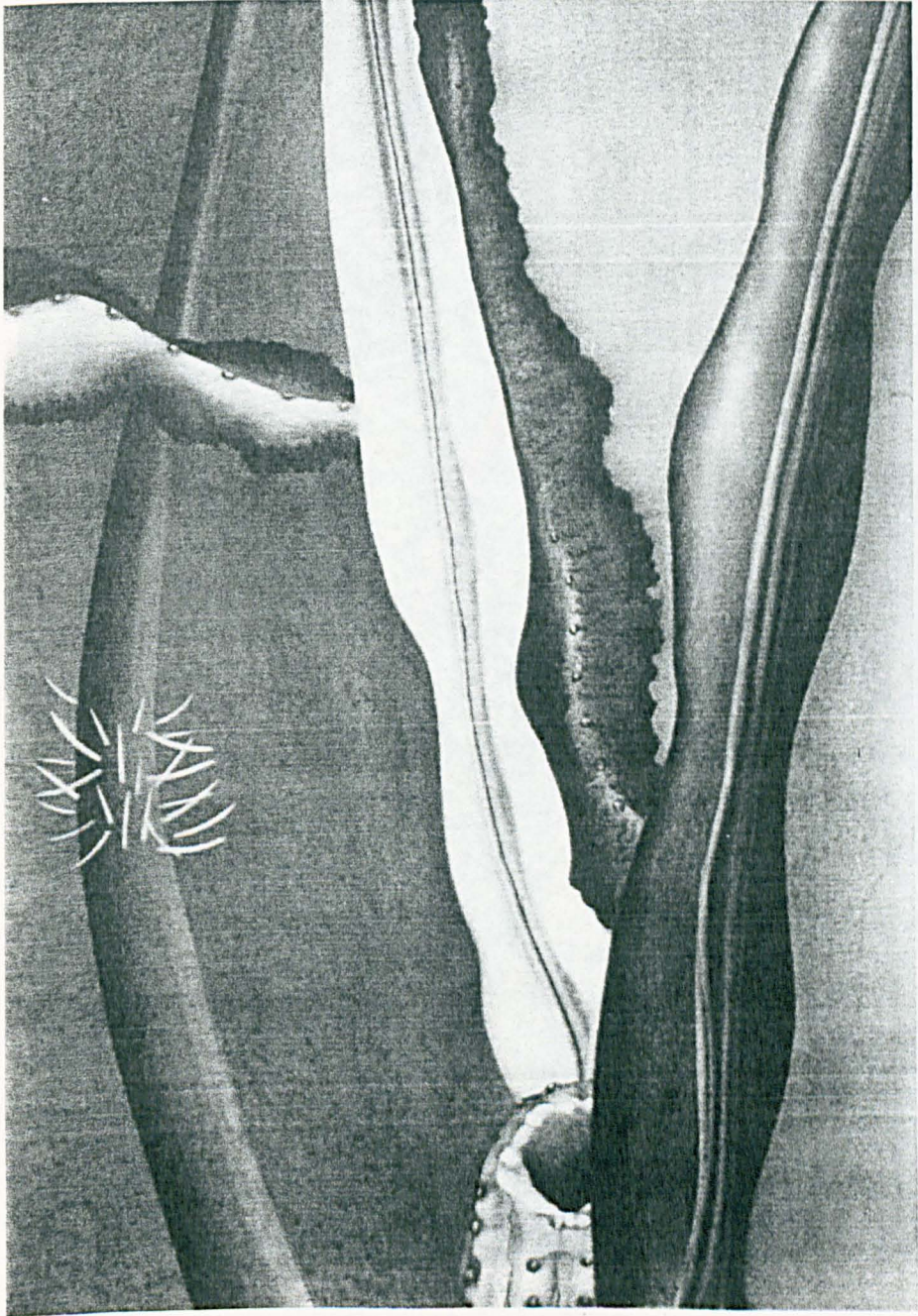


Figure 5.21

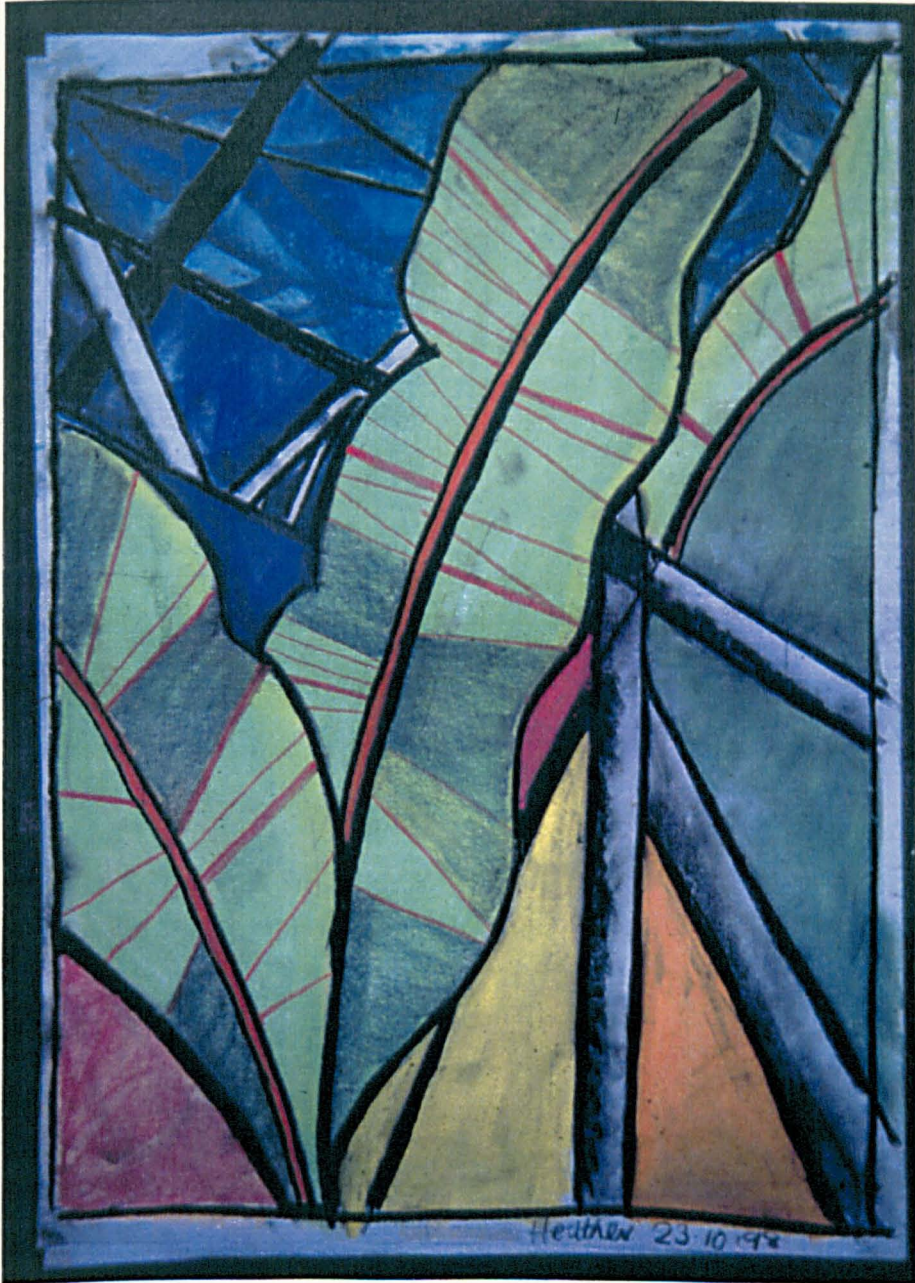


Figure 5.22



Figure 5.23



Figure 5.24



Figure 5.25

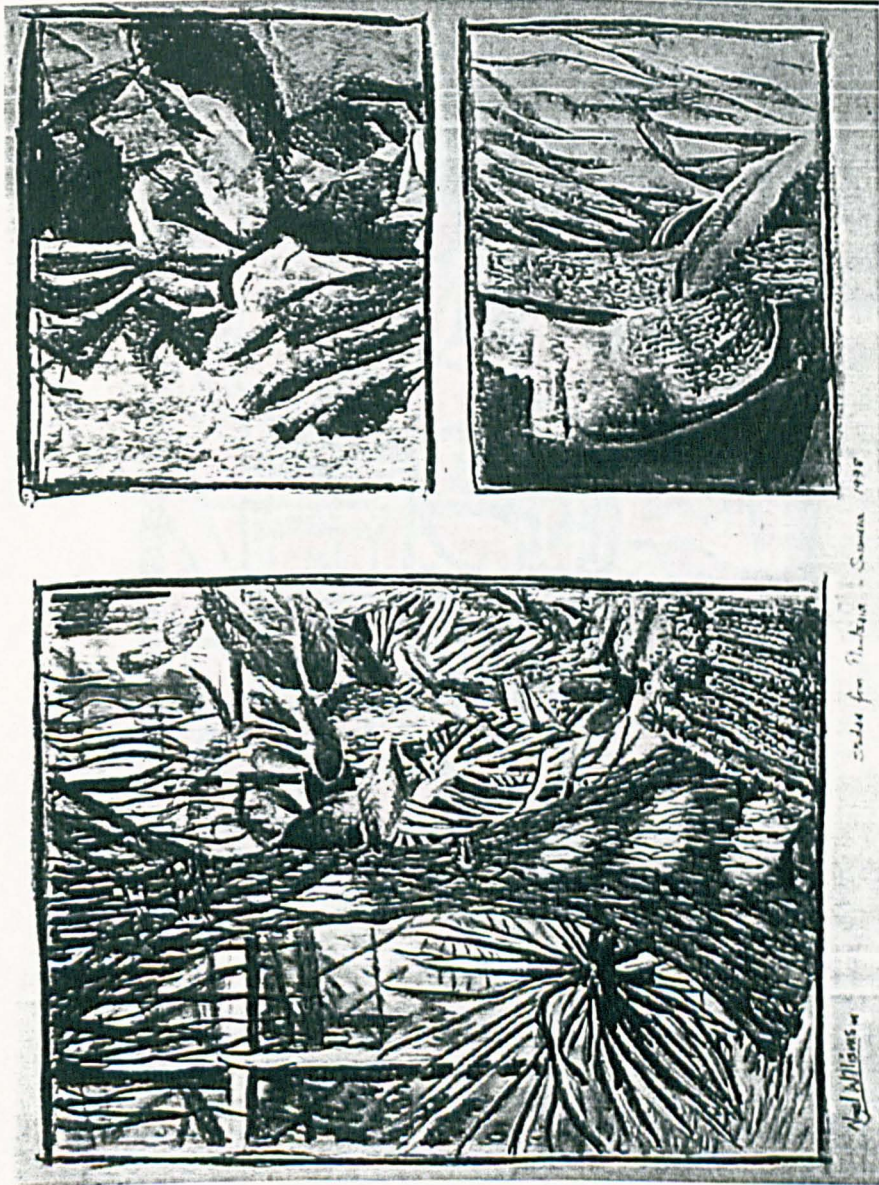




Figure 5.27

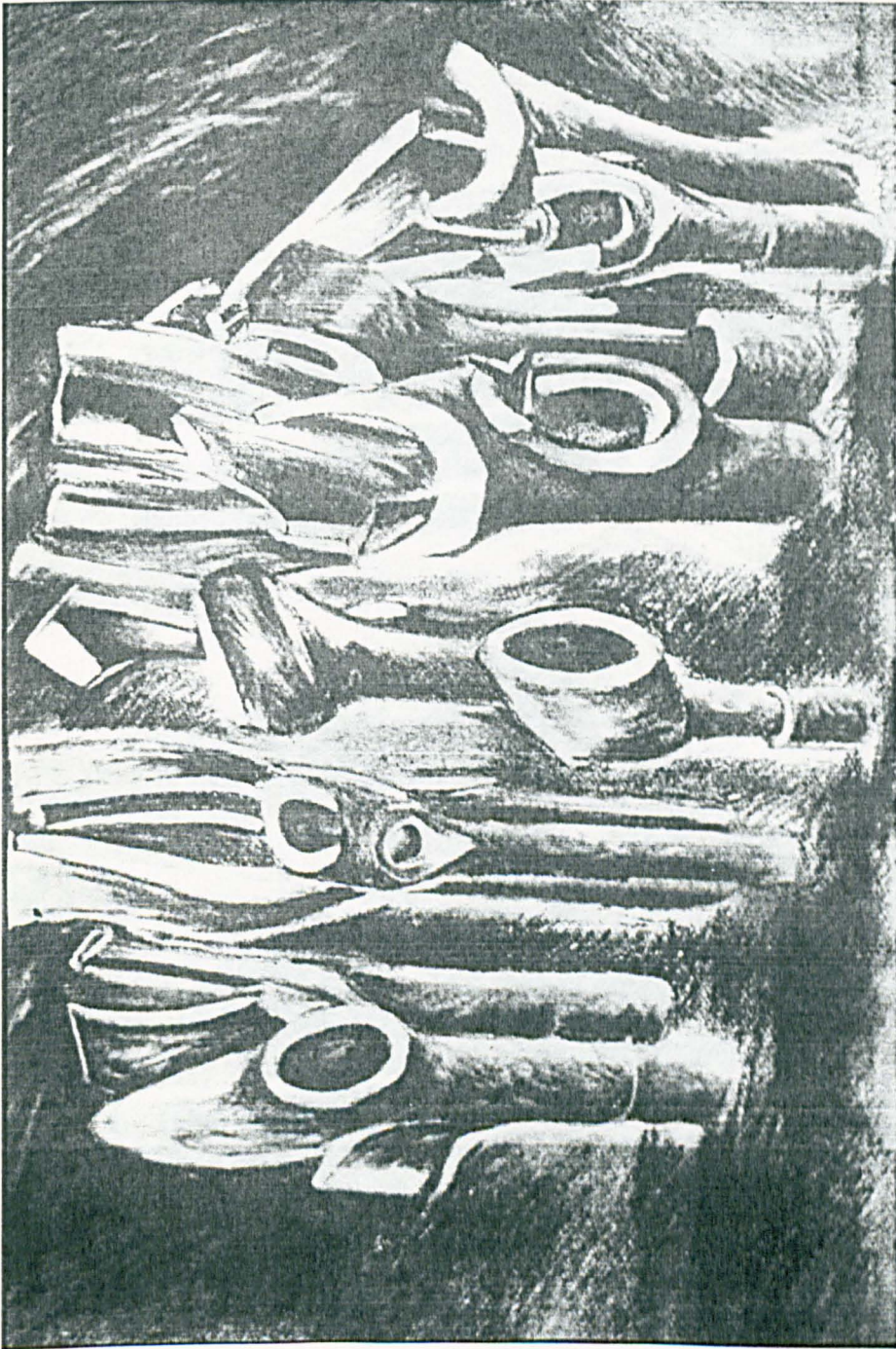


Figure 5.28

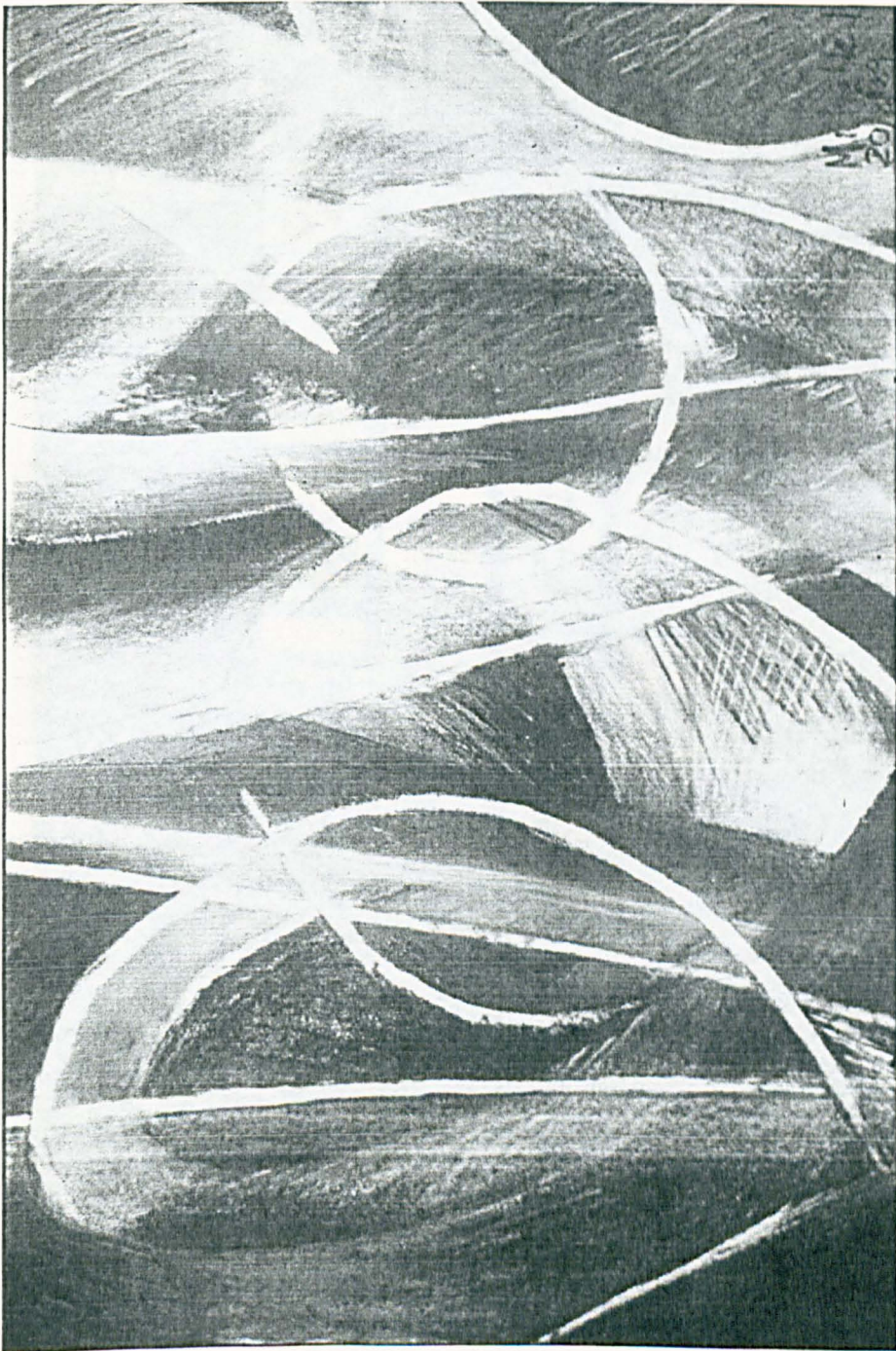


Figure 5.28a



Figure 5.29

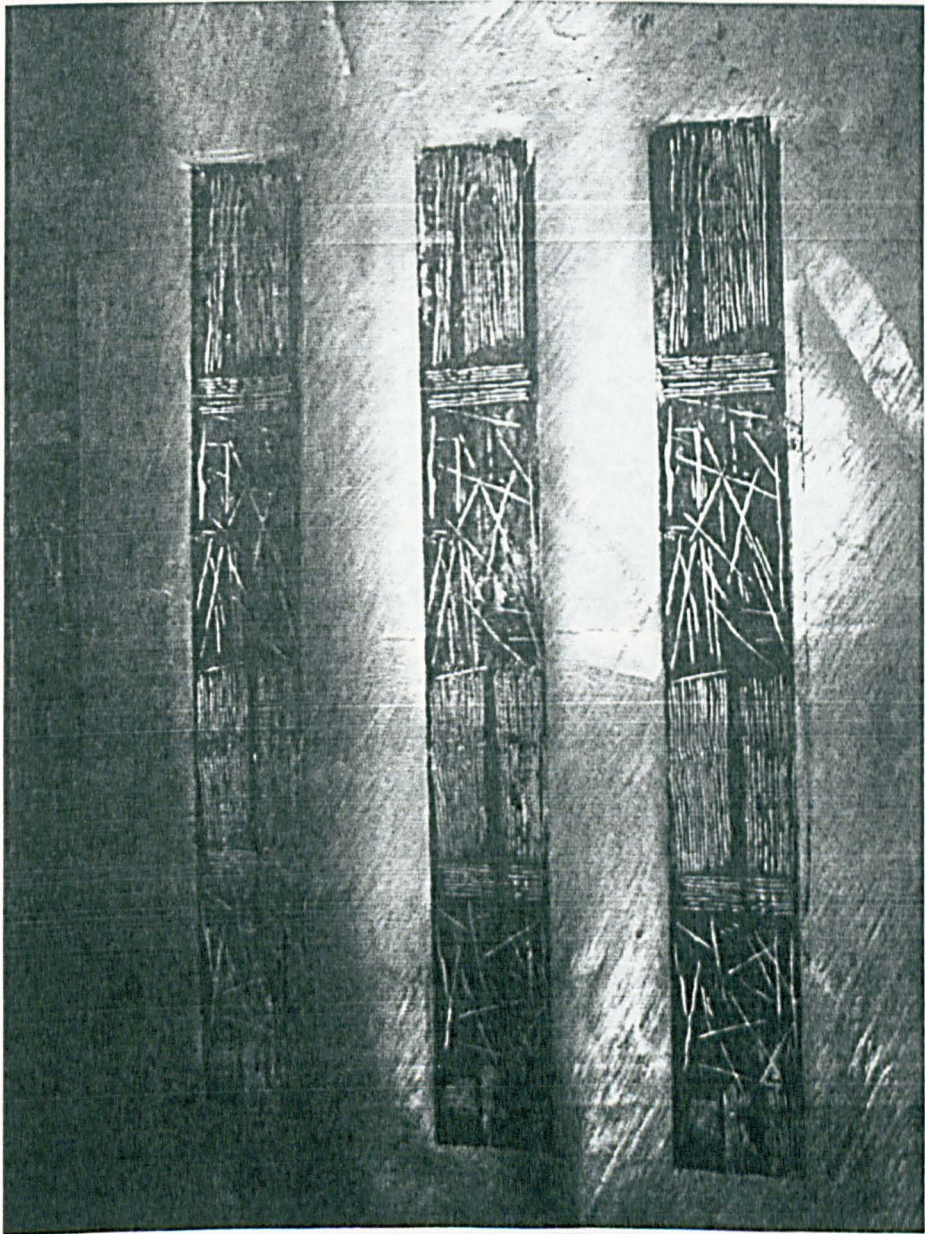


Figure 5.30

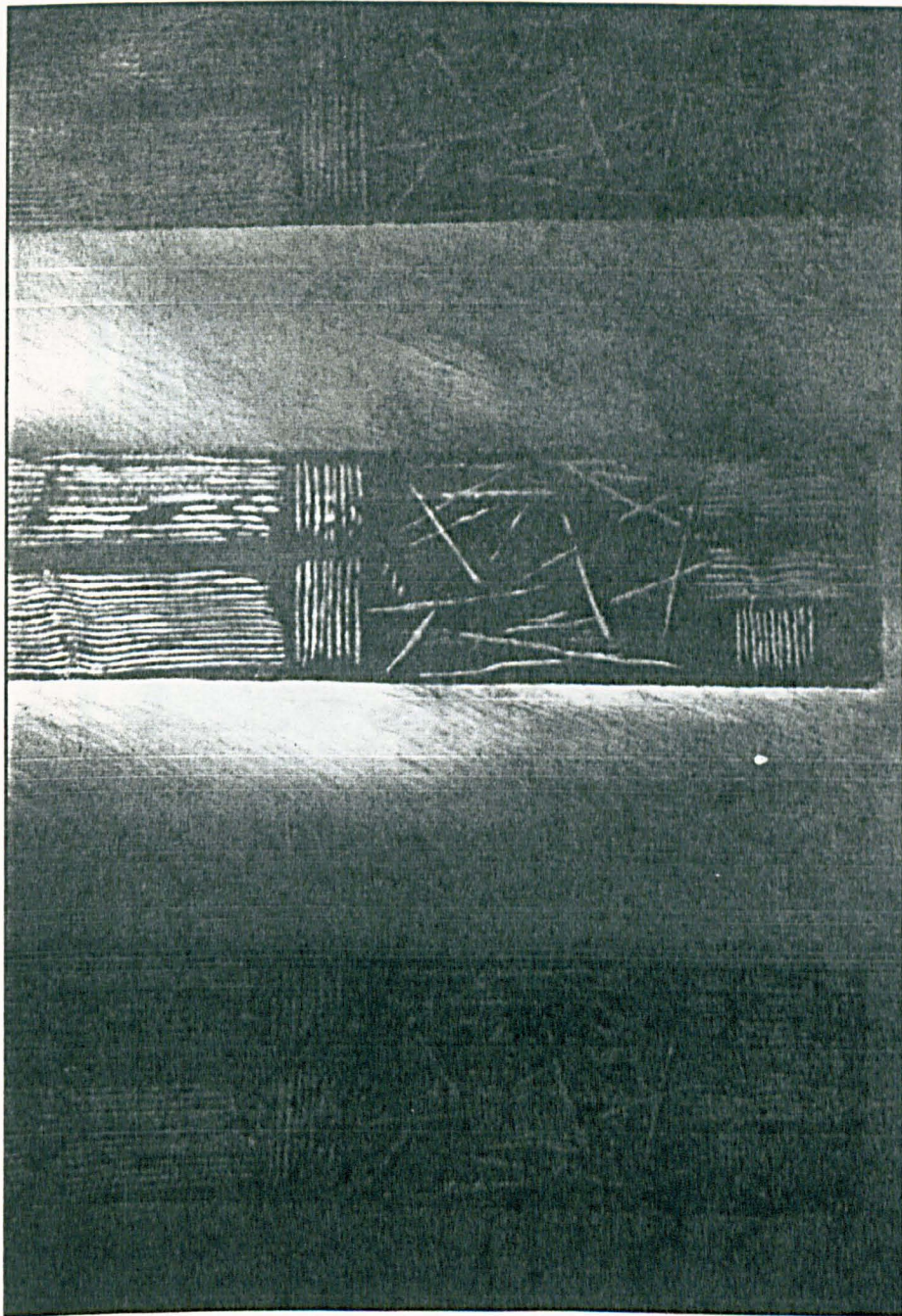


Figure 5.30a

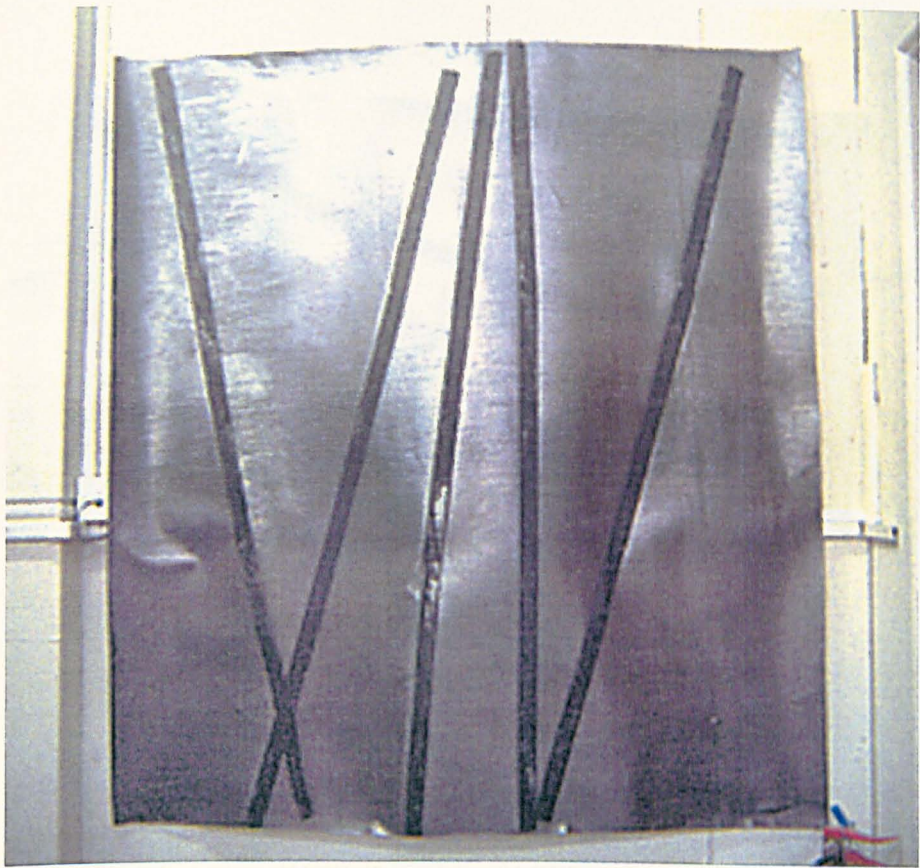


Figure 5.30b

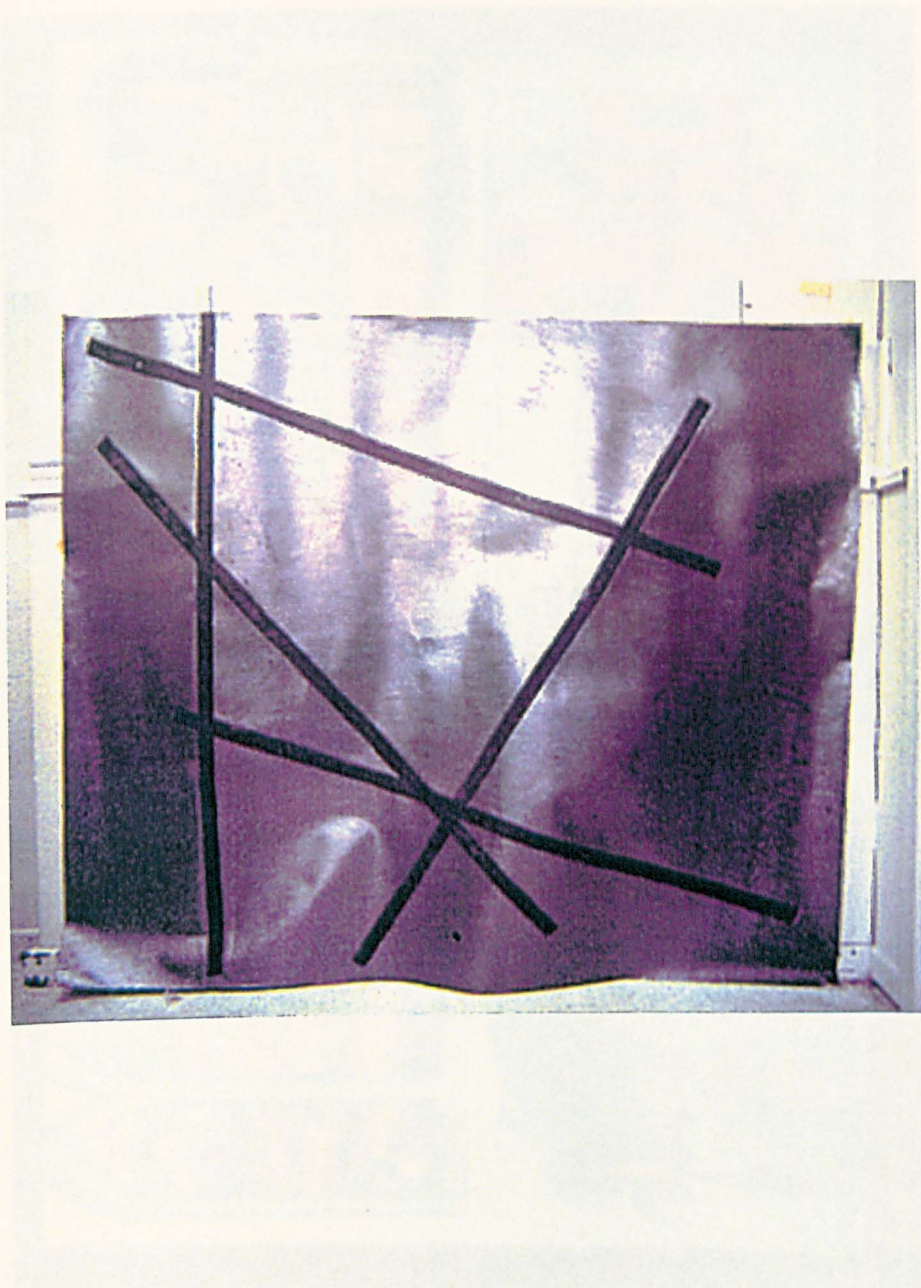


Figure 5.30c



Figure 5.31

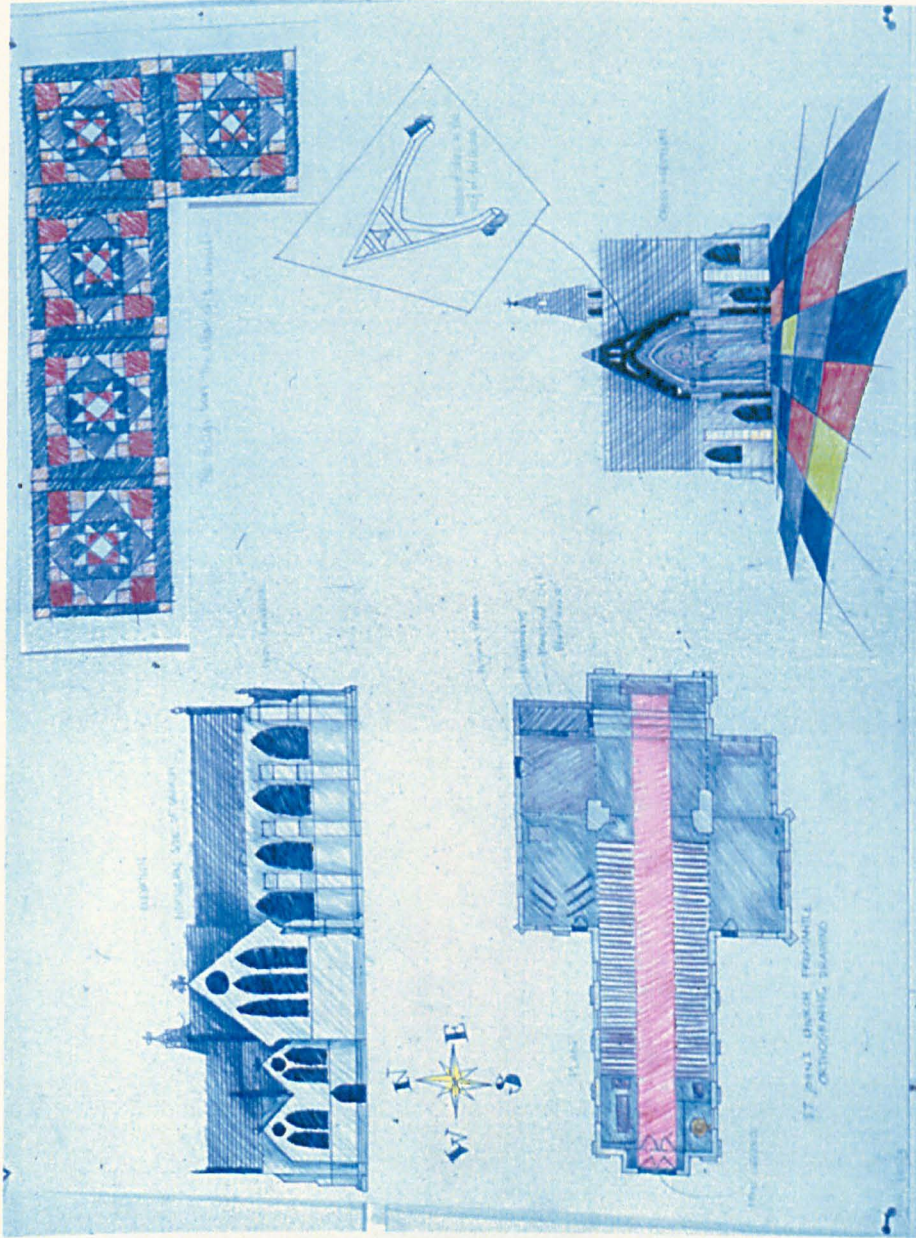


Figure 5.31a

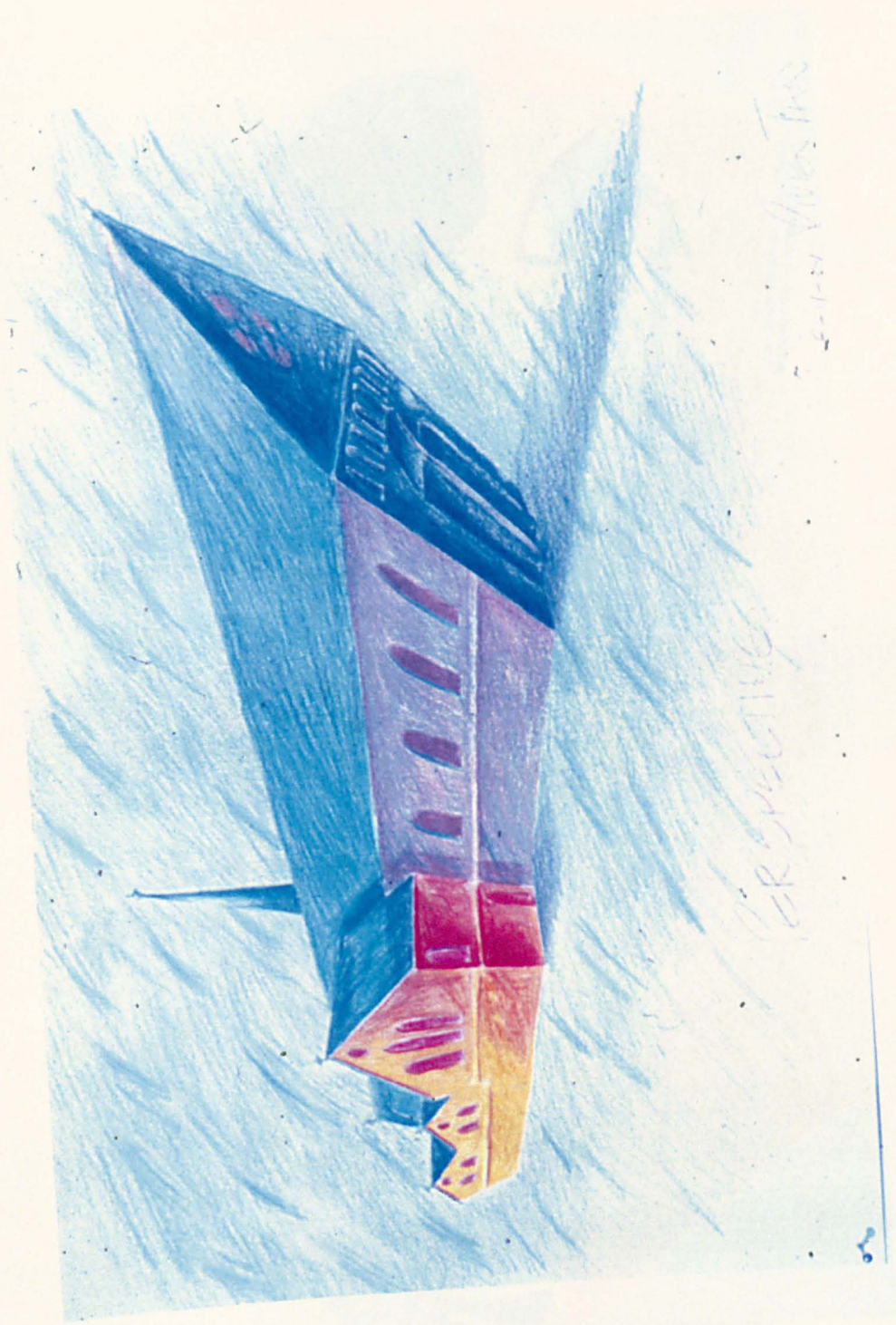


Figure 5.31 b

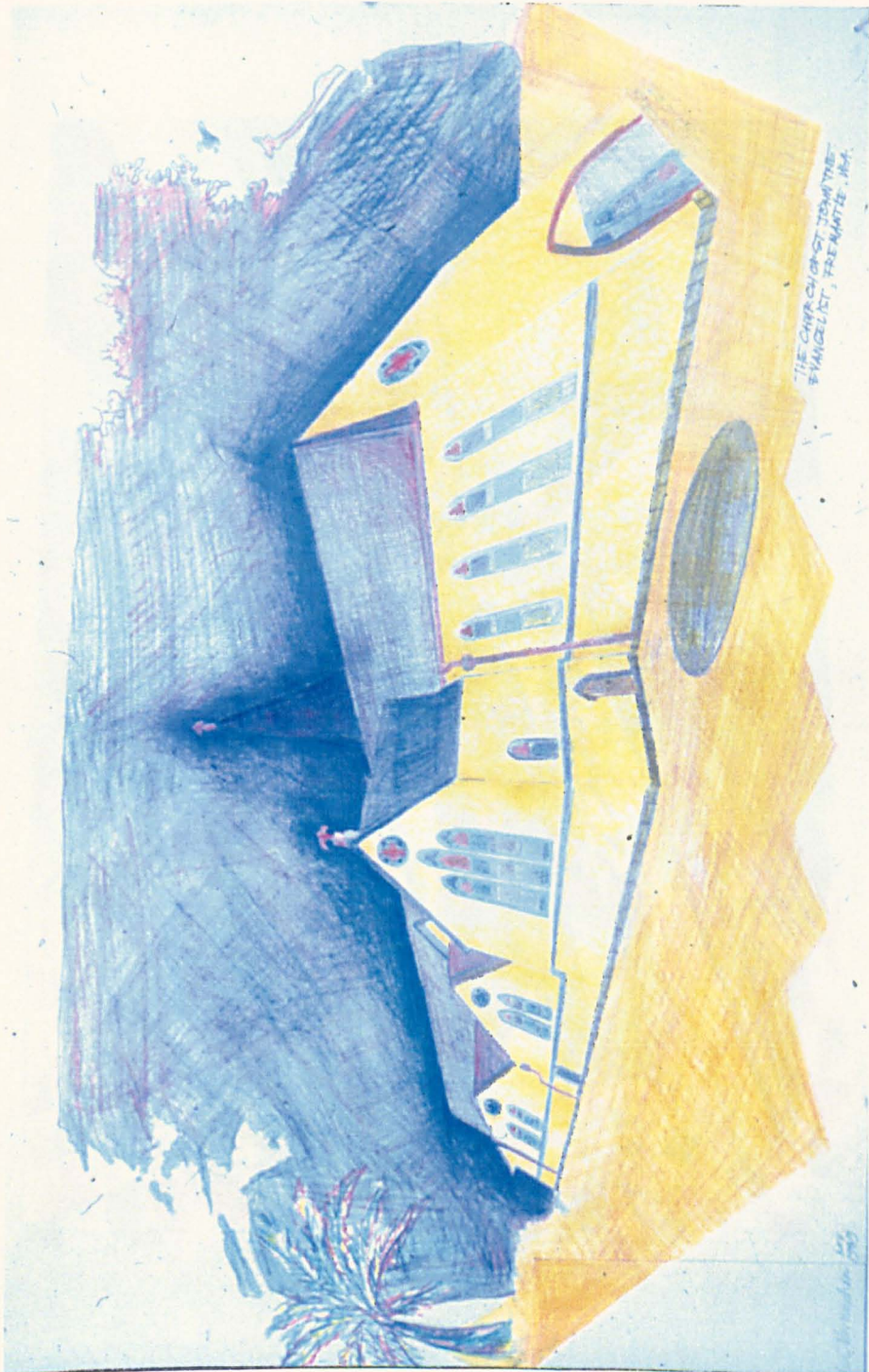


Figure 5.31c

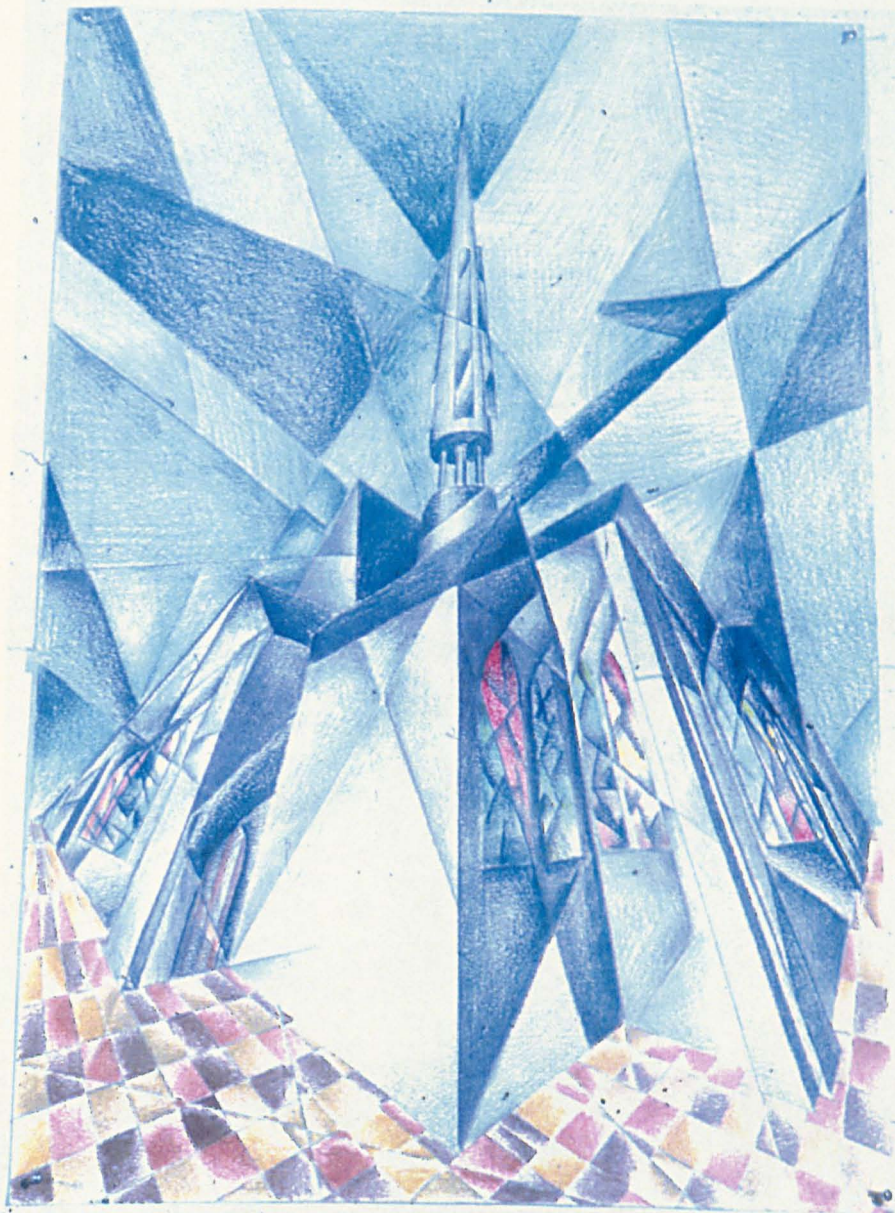


Figure 5.31 d

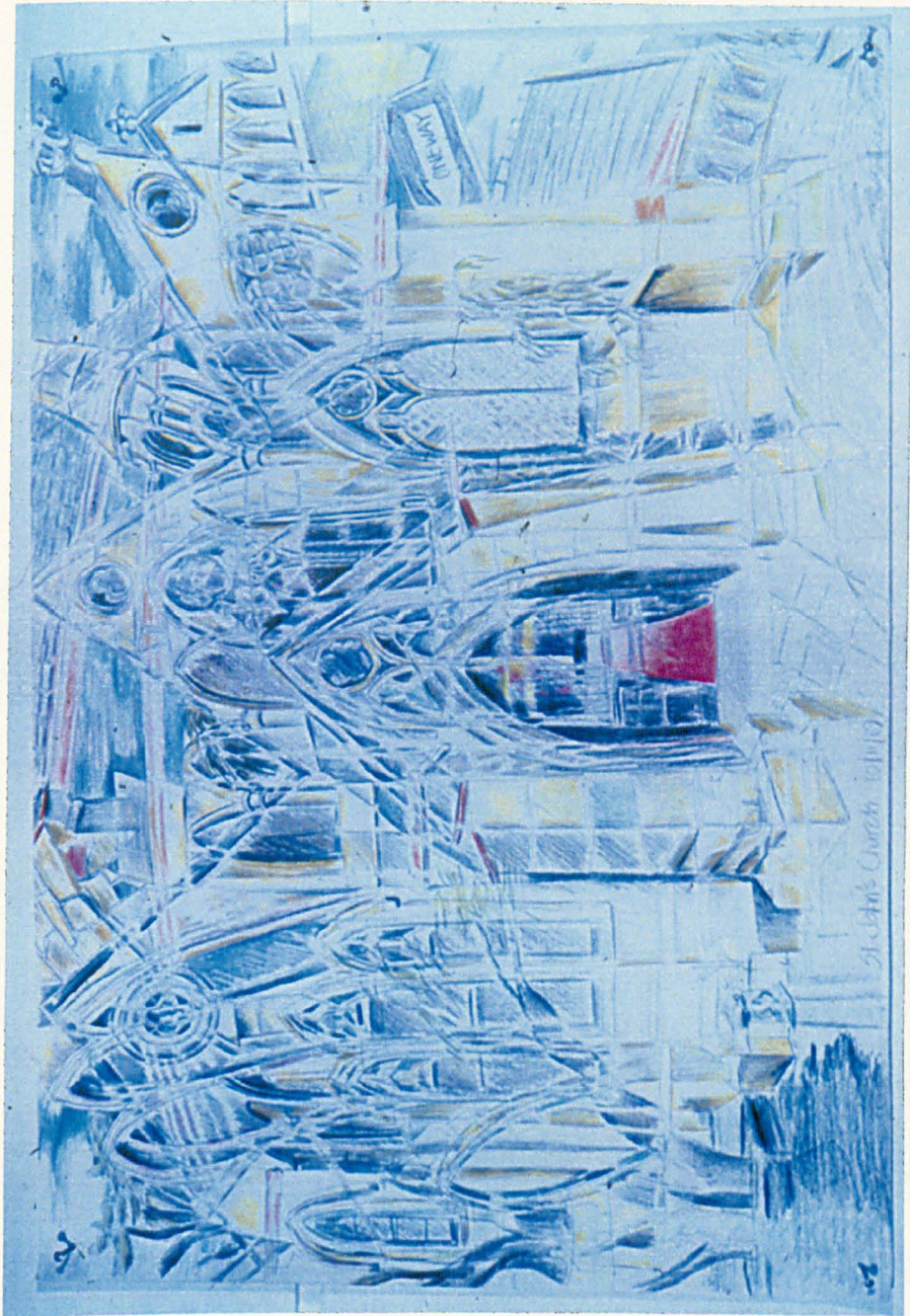


Figure 5.31 e

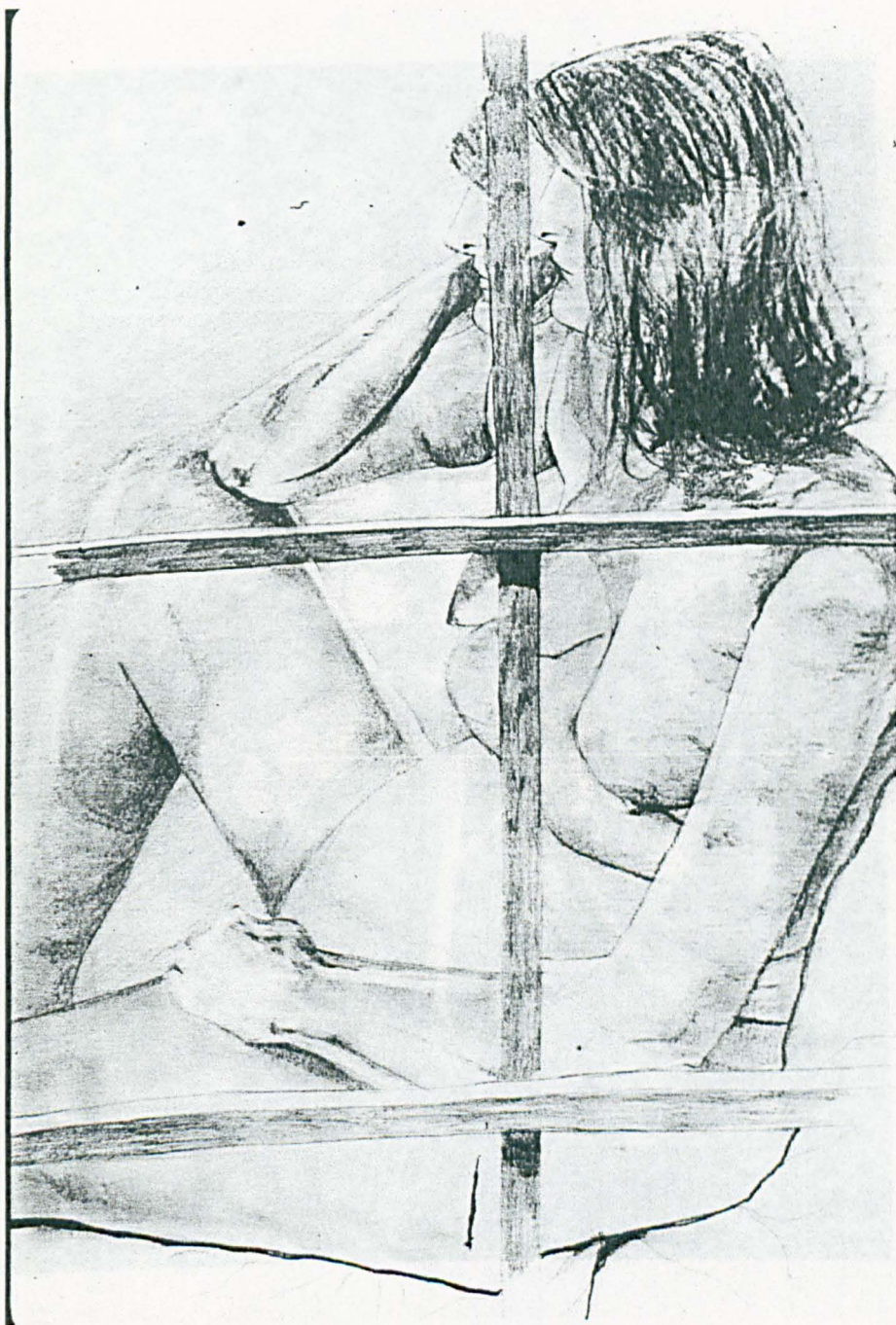


Figure 5.32



Figure 5.33

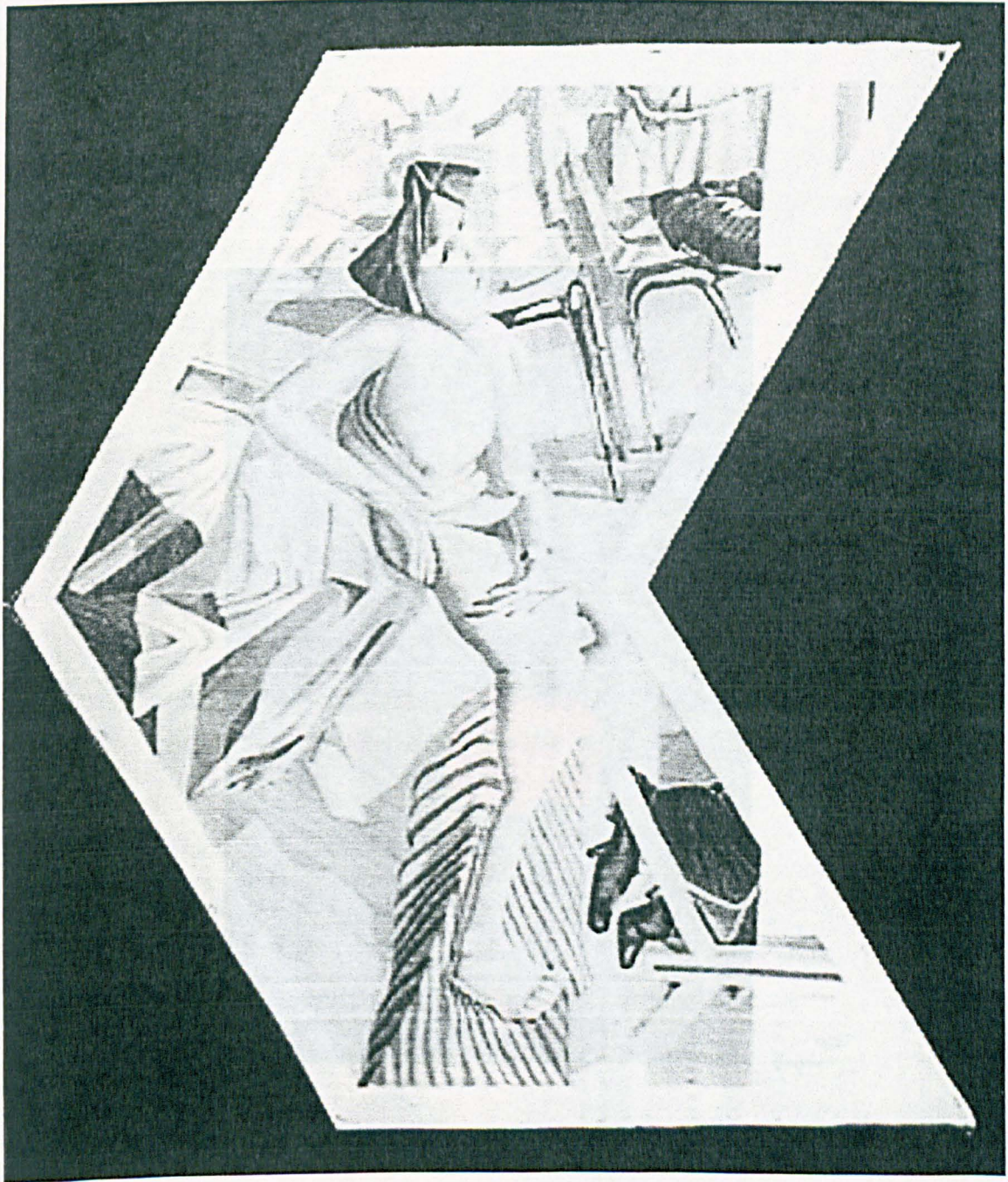


Figure 5.33a



Figure 5.33 b



Figure 5.33 c

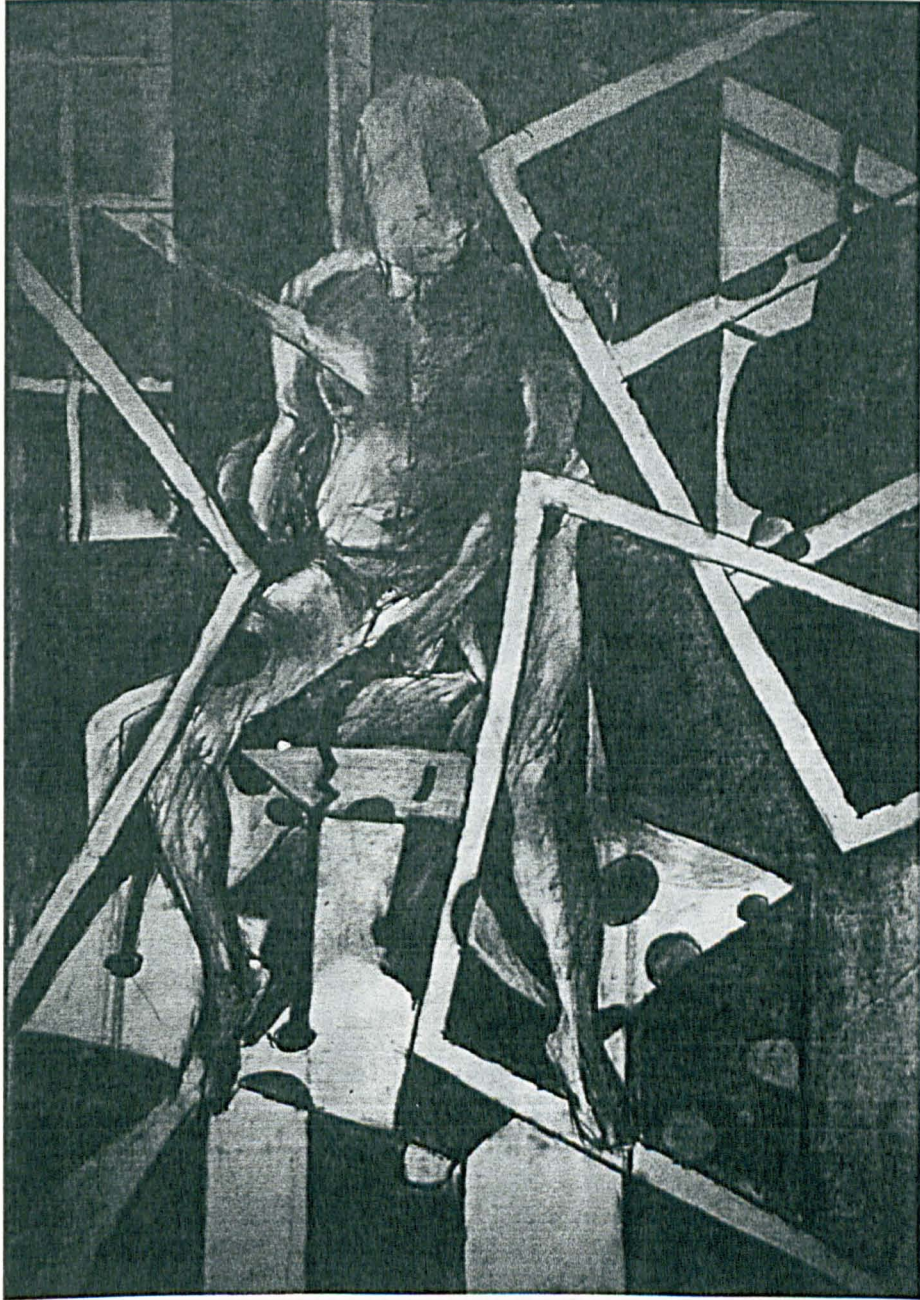


Figure 5.34



Figure 5.35

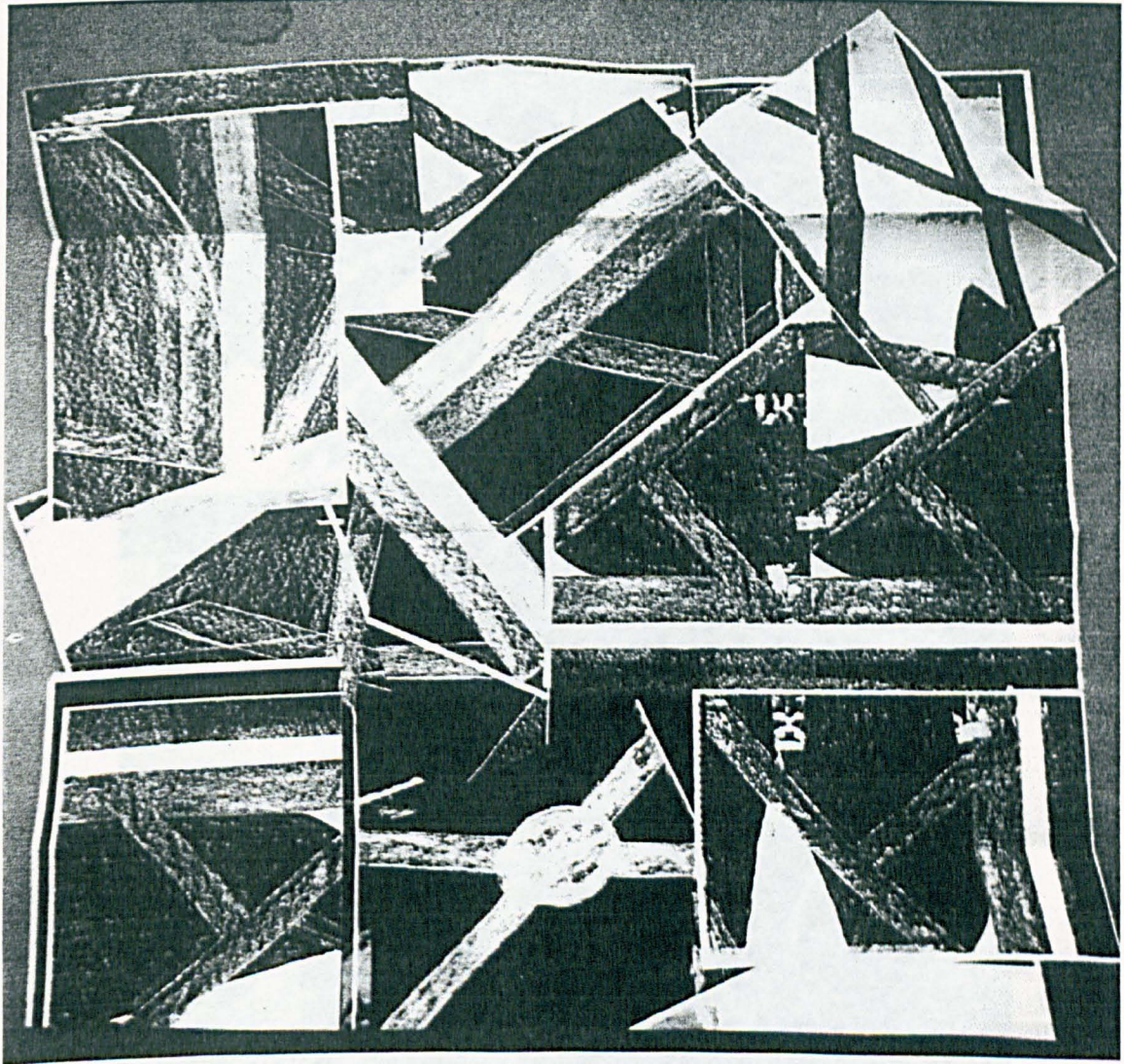


Figure 5.36



Figure 5.36a

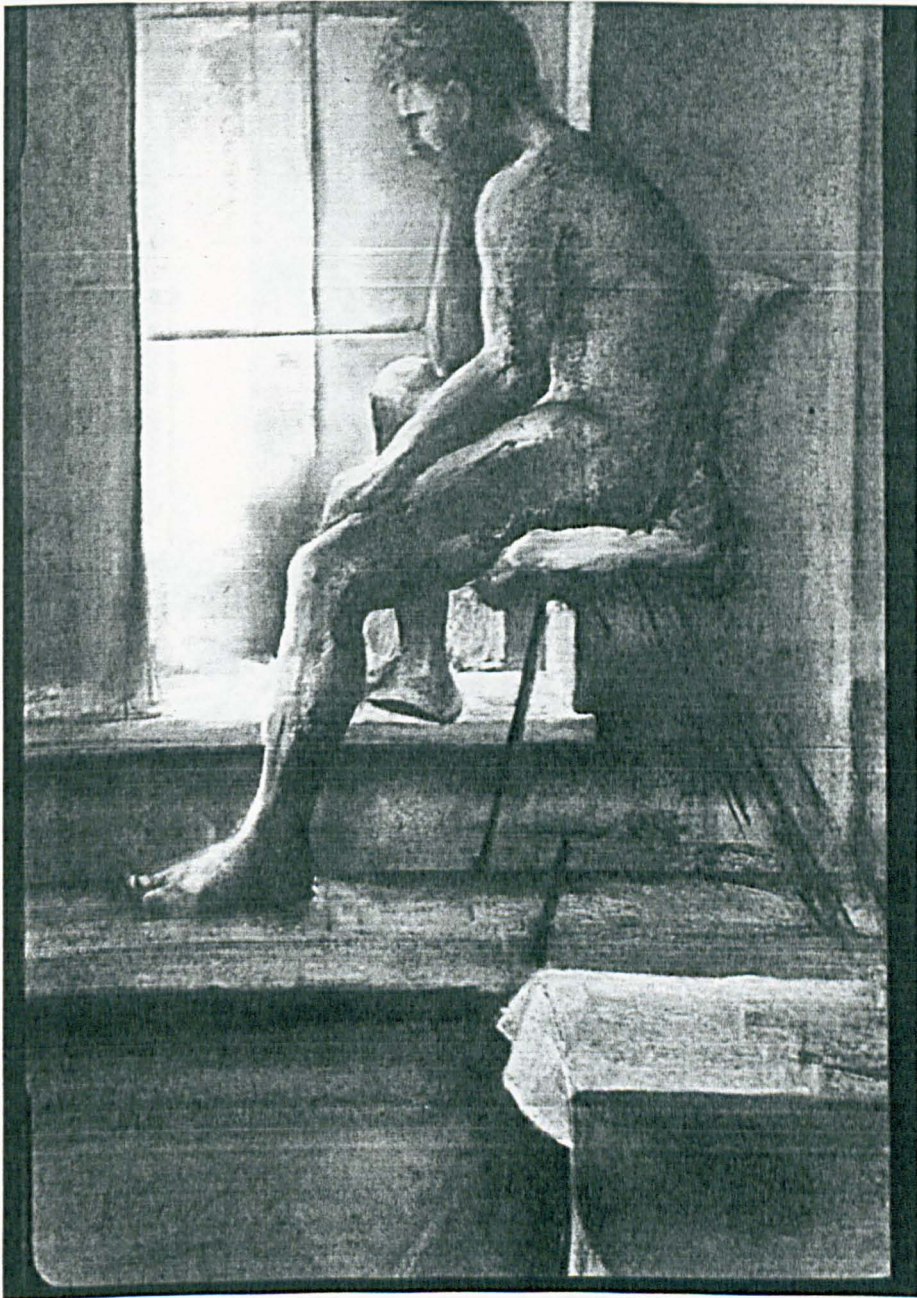


Figure 5.37

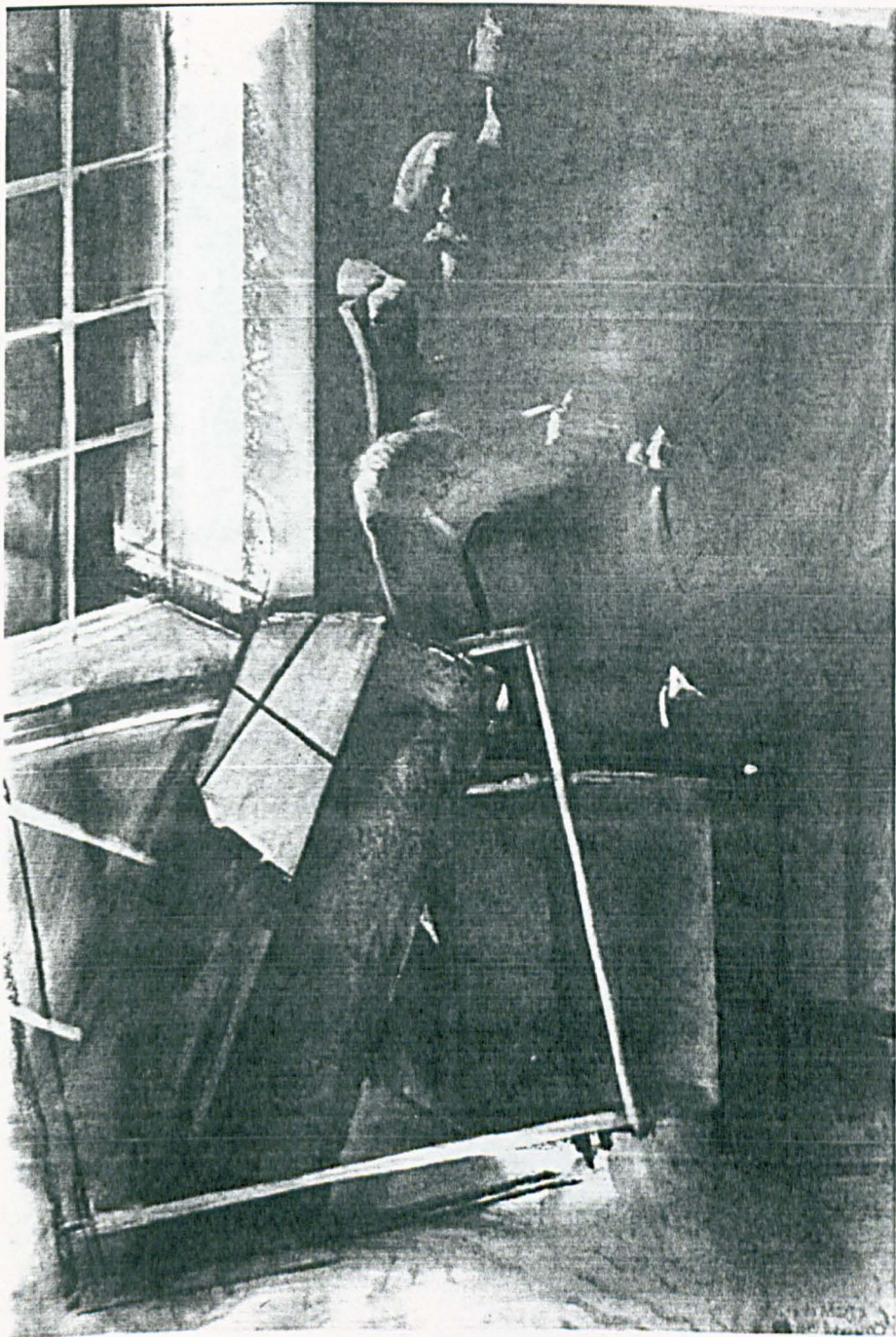


Figure 5.37a

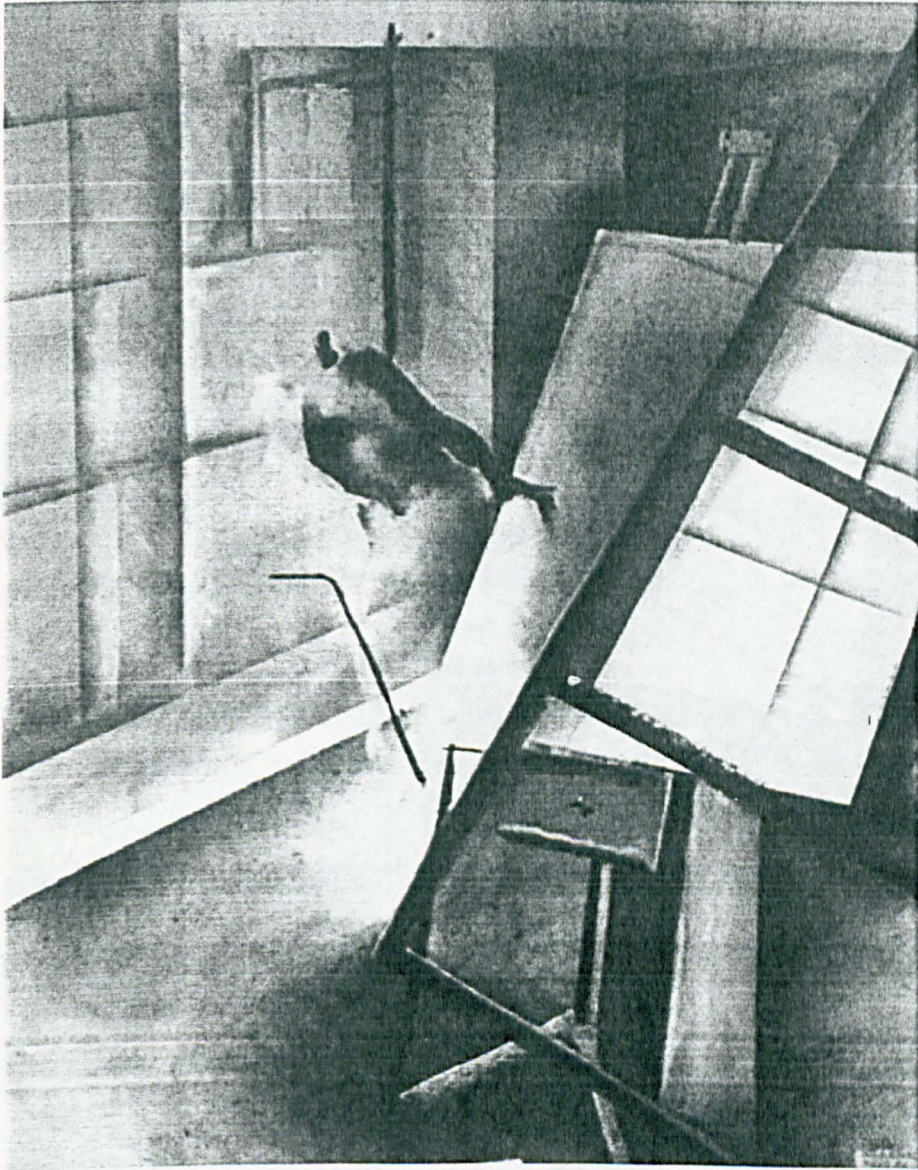


Figure 5.37b

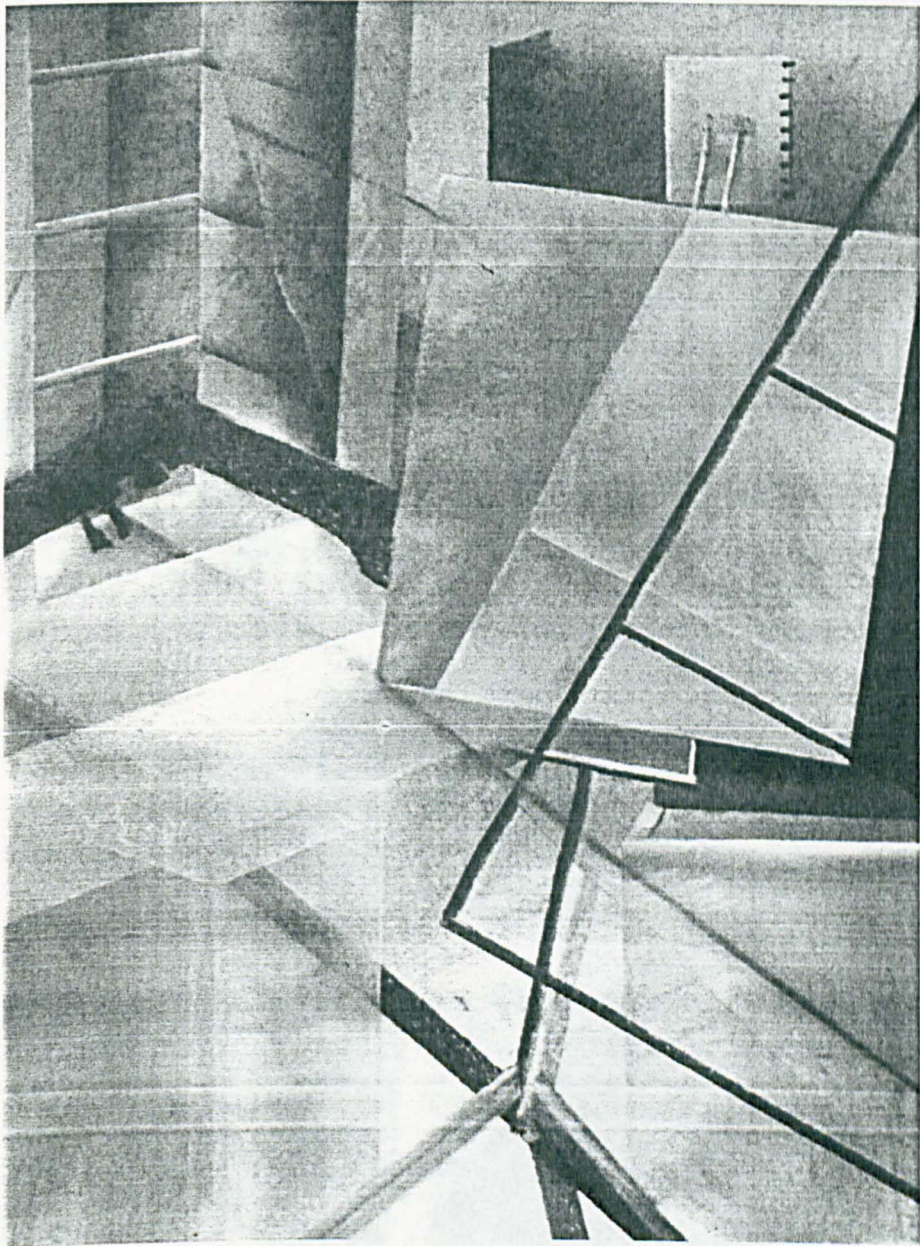


Figure 5.37c

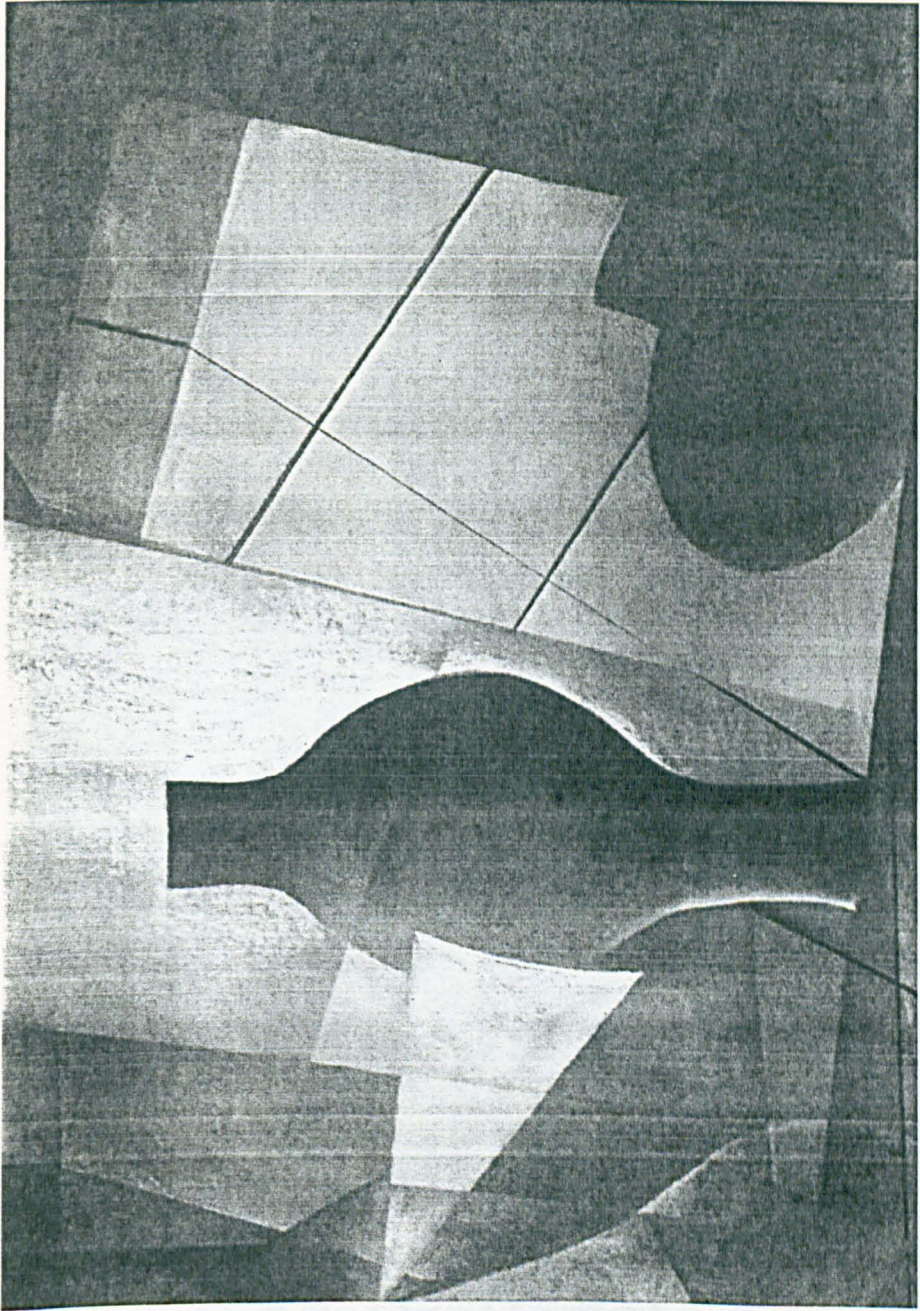


Figure 5.37 d

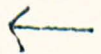
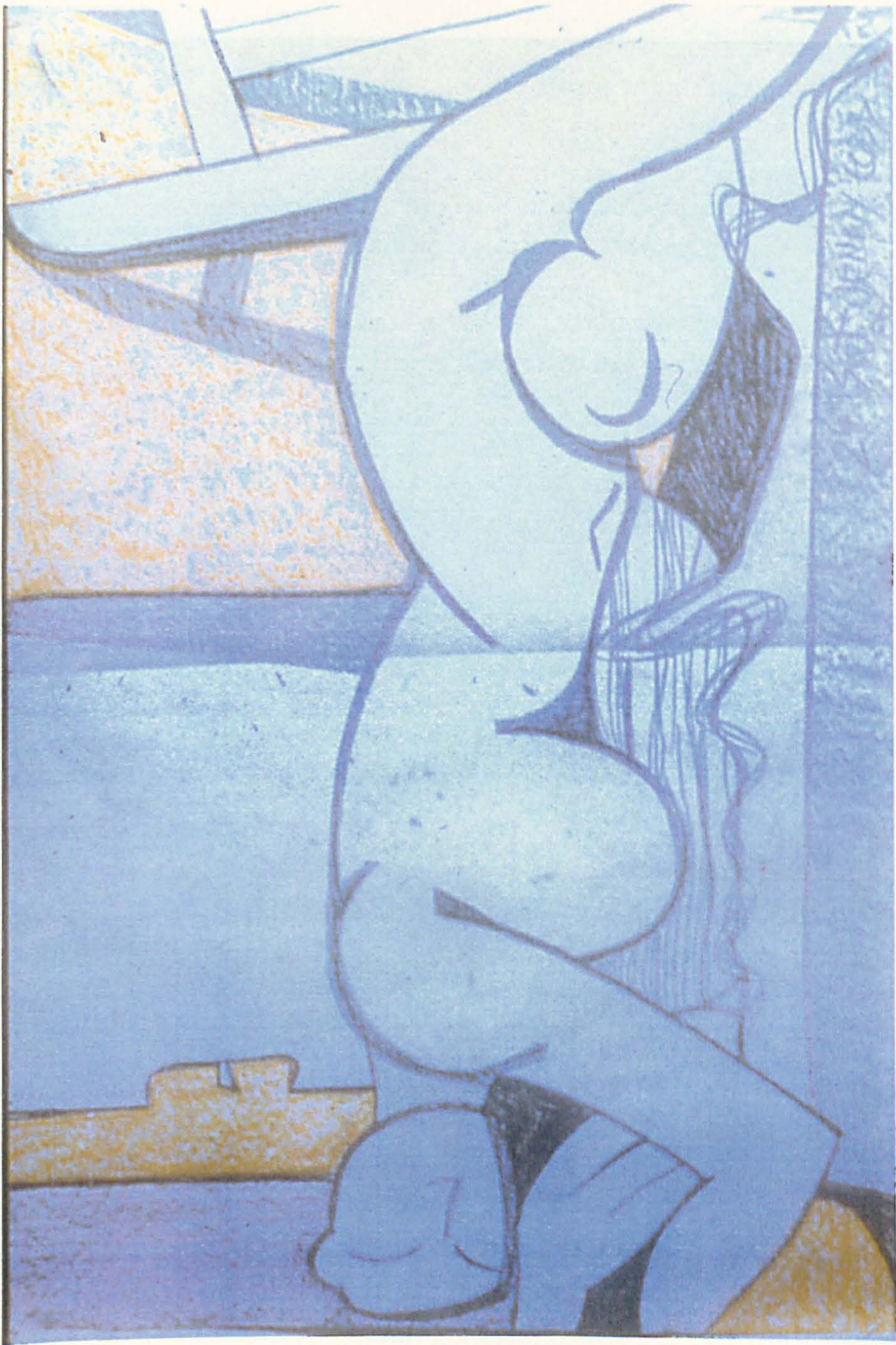


Figure 5.38

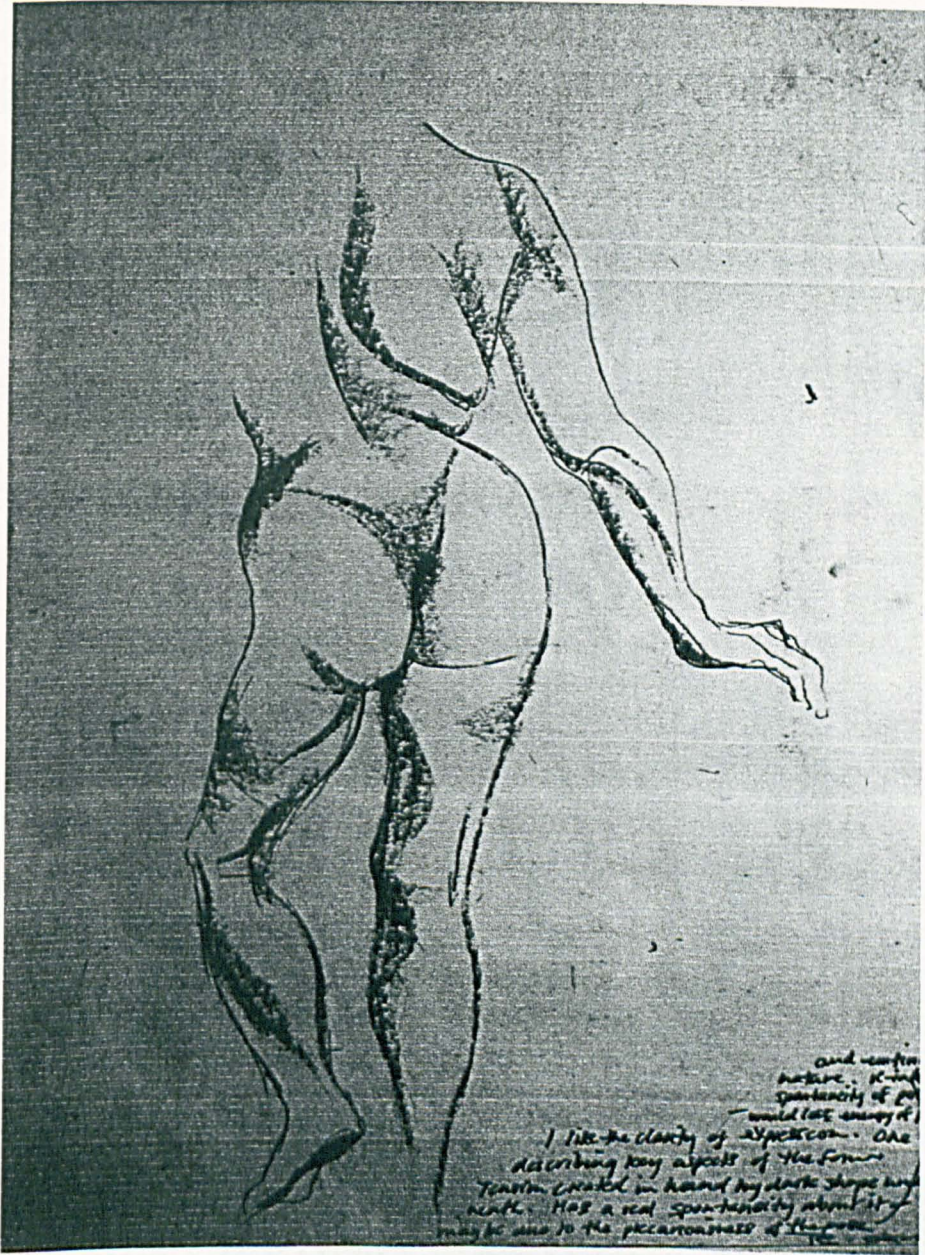


Figure 5.39



Sept 8 1917

Figure 5.40

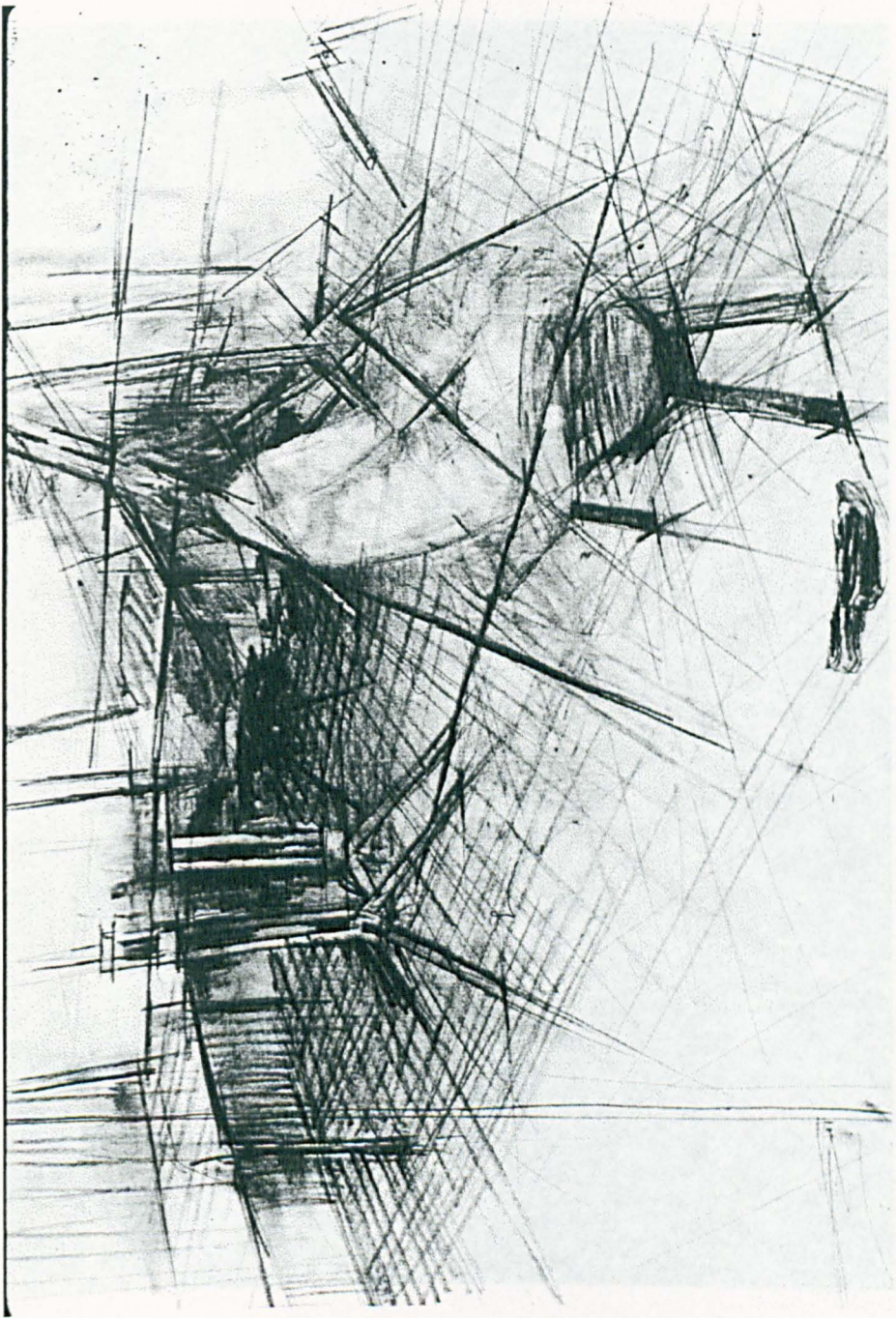


Figure 5.41



Figure 5.42

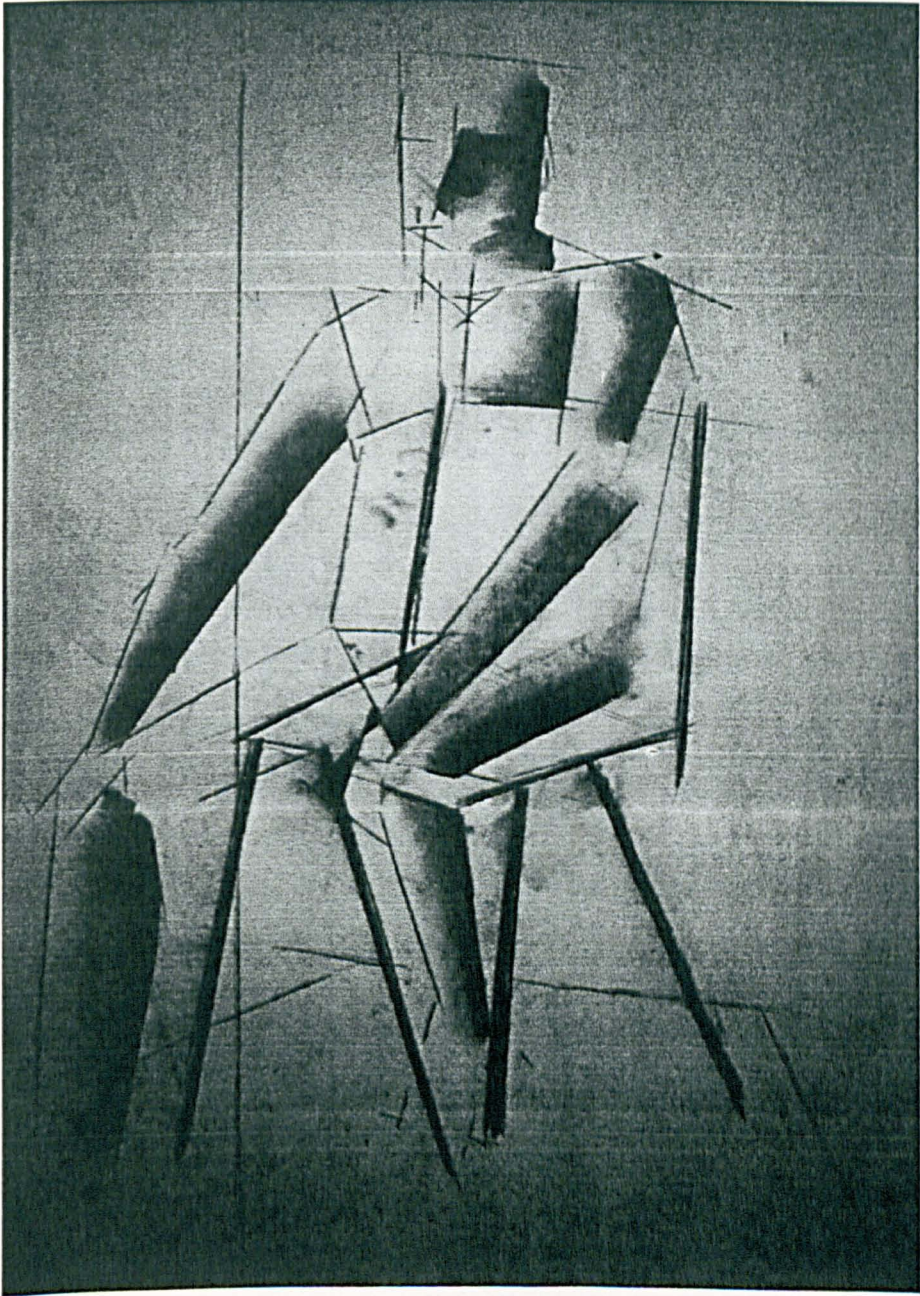


Figure 5. 43



Figure S.44



Figure 5.45



Figure 5.46

APPENDIX A

A PROPOSAL FOR A NEW MODULE IN VISUAL STUDIES

YEAR 1 SEMESTER 1

Introduction

This module is based upon the simple premise that a greater awareness of how we see and how we communicate visually, can enhance the student's facility for drawing.

Aims of module

- To introduce an ecological approach to understanding visual perception through practical drawing and exercises.
- To demonstrate the relationship between different available levels of perception, and conventions of drawing.
- To illustrate how social and cultural constraints affect how we see and how we draw.
- To increase the student's range of responses in terms of drawing.

Objectives/Outcomes

Upon completion of this module, the student will be able to:

- Demonstrate the application of perception theory to drawing practice.
- Demonstrate through drawing practice a greater awareness of the relationship between how we see and how we draw.
- Demonstrate a greater awareness of how social and cultural constraints affect the ways we see and the ways we draw.
- Demonstrate a wide range of drawn responses to the experience of perception, emotion and imagination.

Mode of delivery of modules

A series of practical drawing exercises, in studio and elsewhere, interspersed with illustrated talks and discussions.

3 hours per week for 15 weeks.

Sample Topics

- Looking through language. Drawing which explores what we see, and how we filter such information through words.
- Looking without language. Drawing exercise which explores levels of information available within light: the terms contact values, distances values, and proximal values discussed and clarified.
- Functions of drawing. Drawing exercise which explores the three functions of communication: experiential, interpersonal and compositional.
- Drawing and ideology: A journey through space. Drawing exercise which explores the ways in which social values and belief-systems are embedded within drawing conventions.

Assessment criteria

- The student's attitude to specific issues related to drawing is elicited before and after the module is delivered, by means of Semantic Differential tests. Any perceived change in attitude may then be assessed as positive or negative according to criteria laid down beforehand.
- The student is encouraged to discuss and select drawings which illustrate their growing awareness of the objectives listed above, through a process of continuous self-assessment.

Reading

This module is primarily one of practical drawing. However, students are strongly encouraged to underpin their practice with an understanding of the theoretical issues articulated in the following texts.

- | | |
|--------------------------------------|---|
| GIBSON, J. J., 1979 | <i>The ecological approach to visual perception</i> ,
Lawrence Erlbaum, New Jersey. 155.9 GIB |
| HAGEN, M. A., 1986 | <i>Varieties of realism. Geometries of
representational art</i> , Cambridge U. P.,
Cambridge. 710. 8 HAG |
| KRESS, G. & van LEEUWEN, T.,
1996 | <i>Reading Images. The grammar of visual design</i> ,
Routledge, London. 741.6 REA |
| O'TOOLE, L. M., 1994 | <i>The Language of displayed art</i> , Leicester
U.P./Pinter, London., 701.04 OTO |
| WITKIN, R. W., 1995 | <i>Art and social structure</i> , Polity, Cambridge.
700.103 WIT |

Other texts that support the module:

- ARNHEIM, R., 1974 *Art and visual perception. A psychology of the creative eye*, Univ. of California, Berkeley.
- BRUCE, V. & GREEN, P. R., 1980 *Visual Perception: psychology, physiology and ecology*, 2nd edition. Lawrence Erlbaum, New Jersey & London
- DAMISCH, H., 1994 *The origin of perspective*, MIT Press. Cambridge, Mass. 701.82 DAM
- DUNNING, W. V., 1991 *Changing images of pictorial space. A history of spatial illusion in painting*, Syracuse U.P., New York. 750.18 DUN
- HYMAN, J., 1990 *The imitation of nature*, Basil Blackwell, Oxford. 700.1 HYM
- KEMP, M., 1990 *The science of art: optical themes in Western art from Brunelleschi to Seurat*, Yale U.P., New Haven, Conn. 750.18 KEM
- MICHAELS, C. F. & CARELLO, C., 1981 *Direct perception*, Prentice-Hill, New Jersey (available on I.L.L.)
- MITCHELL, W. J. T., 1994 *Picture theory*, University of Chicago Press, Chicago. 7001 MIT
- REED, W. S., 1998 *James J Gibson and the psychology of perception*, Yale U.P., New Haven, Conn. 153.70924 REE

SWANSEA INSTITUTE OF HIGHER EDUCATION

FACULTY OF ART & DESIGN

Visual Studies Workshop

“The legitimate endeavour of working artists is to practice the art of structuring light”
J.J. Gibson

Welcome to the Light Programme!

Drawing exercises, discussion and slide talks designed to improve your powers of perception and fluency of visual communication.

The programme focuses upon the relationship between perception (how we see) and communication (how we draw).

Each of the following sub-headings will be discussed, and explored through drawing:

1. PERCEPTION

Seeing for survival. A natural process.

- How we see

Light is reflected and refracted from and through materials and media (air, water) in our environment. In the process, its nature is changed, re-structured. These re-structured light rays contain information which we receive directly through our eyes, thus enabling us to act upon and within the world.

- What we see

Light/dark contrasts
Surfaces and edges
Qualities of surfaces: colour, texture, opacity/transparency

We are able, with practice, to change the level of perception: to notice different values of the visual world, haptic values, distance values, and proximal values.

2. COMMUNICATION

Born from the uniquely-human desire to record and share our experiences of perception. Communication is a cultural process.

- How we communicate

Humans have developed systems of signs (codes) in which the signs stand for aspects of the information about the world received from the structure of light rays.

Drawn shapes, tones, colours, textures and lines are combined upon a drawing surface (combined according to agreed rules, or to challenge such rules) to produce visual relationships we call contrast, proportion, scale, pattern, rhythm.

- What we communicate

These combinations of visual signs stand for physical and emotional phenomena we experience in the world:

Spatial depth (distance), force (tension, torsion, compression, shear), direction, movement, volume, mass, weight, balance and instability, structure and form, and of course our position, attitude and mood relative to our experience of the world.

Howard Riley
Senior Lecturer in Visual Studies

**Swansea Institute of Higher Education
Faculty of Art and Design**

**BA(Hons) Fine Art/Painting and Drawing
Year 1 Semester 1**

Visual Studies Workshop

Drawing, just like that other useful human invention, language, may be used to communicate information about our world, to express how we feel about our world, or even to invent alternative worlds.

Like language, making sense in drawing is a process of selection and combination: We select from the alphabet of drawing elements and combine our selections so that people may read them. (Sometimes in the fine arts, drawings are made to challenge or question the way people read them.)

But unlike language, whose alphabetic signs bear no resemblance to things in the world, drawings may resemble their referents in limited ways...

ELEMENTS OF DRAWING	COMBINATIONS OF ELEMENTS PRODUCE:	THESE COMBINATIONS STAND FOR PHYSICAL PROPERTIES WE OBSERVE IN THE WORLD:
<ul style="list-style-type: none">• point• line • shape• texture• tone• colour • plane (the drawing surface)	<ul style="list-style-type: none">• contrast• proportion • scale• pattern• rhythm• figure/field compositions• symmetry/asymmetry	<ul style="list-style-type: none">• spatial depth (distance)• force (tension, compression, torsion, shear)• direction• direction• movement• volume, mass, weight • structure, form• effects of light reflected from surfaces & edges• observer's position/viewpoint

The visual studies workshop will examine how drawings are made to represent our physical and emotional relationships with the world.

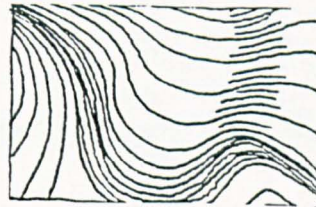
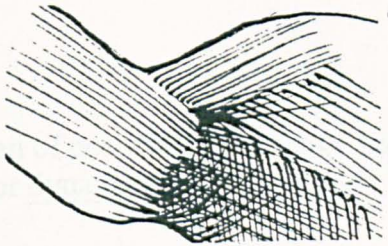
Drawing exercise 1: Line and plane (drawing surface)

What do lines represent?

Object line: Lines can stand for objects.



Hatch line: A group of closely-spaced lines can stand for a surface, and by varying and spacing, can represent changes of direction.



Contour line: Lines that stand for the edges of surfaces, the boundary between overlapping surfaces.

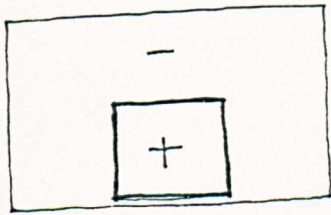


- Use hatchlines of uniform tone and thickness to describe the undulating surface of the figure by varying their spacing.
- Use contour line to separate the figure from its surroundings. Vary tone and thickness to indicate weight and distance (spatial depth).

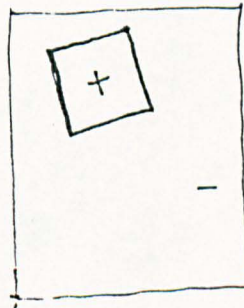
Drawing exercise 2: Shape and tone, texture and plane

What do drawn shapes represent? The surfaces of objects viewed from a fixed position, or the spaces between objects. In drawing, these are called positive shapes and negative shapes respectively.

The combination of positive and negative shapes within the shape of your drawing paper can produce static or dynamic compositions:



Stable, static
symmetrical

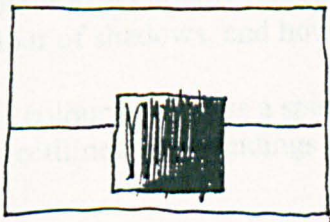


dynamic, unstable,
asymmetrical

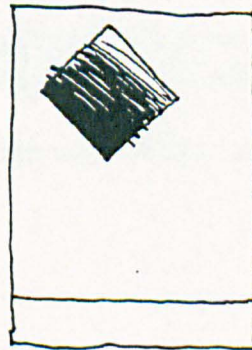
What do drawn tones represent? The variable intensities of light reflected from surfaces in the world.

The combination of shape and variable tone can represent three-dimensional form, and also weight, solidity.

static mass



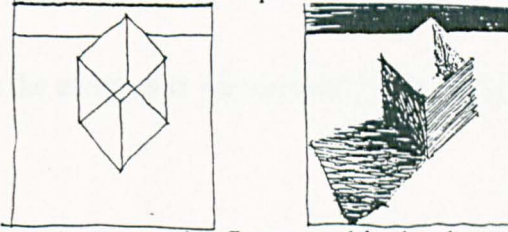
dynamic mass



Texture Note that your drawing surface in combination with your drawing tool will automatically provide texture to any tone. Select paper and tool with this in mind.

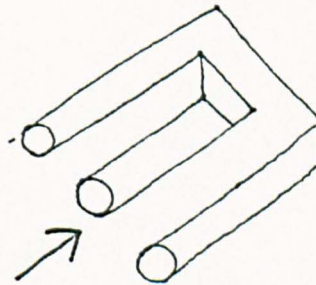
Use tonal contrast to separate the figure from its surroundings, and also to describe surface forms. Combine positive shapes and negative spaces in a static composition, and in a dynamic composition.

Note that the contrast boundary between different tones produces an illusion of depth in the drawing:



Note also that where there is no contrast between the figure and its background, we have no difficulty in reading the form. This mental completion of the figure is known as a “closure”.

Note in the line drawing that the elimination of tonal and textural contrast can produce ambiguities of form. Here's a famous example:



Drawing exercise 3: Colour

What does colour represent in drawing?

The simplistic answer is mood. Colour combinations can invoke feelings and emotions like hot and cold, quiet and loud, happy and sad.

Accurate observation of colour can communicate the effects of light reflected from different surfaces in the world. Exaggeration or distortion of colour (and the other elements) produces disturbance in the reader's response. This is the essence of expressionism.

- Use colour to accurately record the effects of light upon the figure and surroundings. Note the colour of shadows, and how the effects change as the light changes.
- Use the colour to express a specific mood, e.g. the vulnerability of the life model within the harsh, rectilinear surroundings of the studio.

Drawing exercise 4: Relativity and drawing

So far, drawings have been made of a static model from a fixed viewpoint. But in normal life the world is viewed from a moving path of observation. We learn about the world by moving around it, and of course we recognise that the appearance of objects alters as we do so. The way things look is relative to the observer's viewpoint.

- Make a drawing that expresses a response to the model moving along a pre-determined circuit.
- Make a drawing that expresses the changes in appearance of the model as you view the figure from a series of viewpoints.

Drawing materials

You will need charcoal, fixative, chalk or oil pastels, a plastic eraser, masking tape, energy and an inquisitive mind.

Howard Riley
Senior Lecturer in Visual Studies

Swansea Institute of Higher Education
Faculty of Art and Design

BA(Hons) Fine Art/Painting and Drawing

VISUAL STUDIES Year 1 Semester 1

Looking through the prism-house of language

This exercise encourages you to consider whether how we think and how we behave is conditioned by our social context. This is not to say that we all think and behave in the same way under the same social conditions, but the fact is that we have more in common with each other than we have differences between us.

For example, we share the same language. And through language the world gets reflected, refracted and restructured rather like viewing things through a prism.

What we see often seems different to what we know because language-structured perception filters much of the information arriving at our eyes (Remember PARIS IN THE THE SPRING!)

Try this exercise:

Close your eyes and think BLUE. Open them, and notice how patches of blue appear to stand out. Try the same for other colours. Make drawings that emphasise each colour. You'll have noticed that you can adjust the way you see.

Levels of perception (changing your viewing channels)

Fix your attention on an object some distance away. First of all, notice its texture(s), imagine how it would feel to the touch. Make drawings to represent your response to these haptic values.

Now judge how far away the object appears to be. Become conscious of how you judge distance. Do you compare relative sizes of things? Relative tones? Make drawings to record your judgement of these distance values.

Now consider the object in relation to the surfaces around, in front and behind. Notice the pattern (use a card viewfinder, look through with one eye). Try and lose the object, let it merge into the overall pattern. Make drawings, emphasising the pattern of the overall visual field. You are now dealing with proximal values.

Such exercises allow us to recognise that we are able to 'switch channels' on our perception machine. Practice switching your channels anywhere and anytime. (except when driving!)

Howard Riley
Senior Lecturer in Visual Studies

**Swansea Institute of Higher Education
Faculty of Art and Design**

BA (Hons) Fine Art, Painting & Drawing

VISUAL STUDIES Year 1 Semester 1

Welcome to Plantasia

You are asked to produce a series of five drawings finished to exhibition standard, which explore the three functions of visual communication discussed in the slide-talk:

1. The Representational function

Deals with the appearance of things and events. When making drawings that emphasise representation, remember the three levels of perception discussed in the studio.

Notice the haptic values of the subject-matter, (those properties that inform us about the 'feel' of surfaces and edges)

Notice the distance values (those visual clues which inform us how far away surfaces and edges are in relation to each other and ourselves).

Notice the proximal values (the pattern arrangement of surfaces and edges within your visual field).

***WORK REQUIRED:** 3 finished drawings.

2. The Interpersonal function

Deals with both expression of your mood, and the positioning of the viewer in terms of attitude and mood. Before making your drawing, decide what mood, attitude, position you wish to adopt.

***WORK REQUIRED:** 1 finished drawing (minimum).

3. The Compositional function

This works to make visible the other two functions.

Remember every single choice you make will affect the meaning of your drawings; type of paper, format, scale, medium, the positioning of visual elements within the frame – all carry meaning. Where there is choice, there is meaning! You choose the kind of composition that suits what you want to communicate about mood and appearance of the subject matter.

SELECT
Elements of
drawing:

COMBINE
Combinations of
elements produce:

COMMUNICATE
Combinations
stand for physical
and emotional
experiences of the
world:

point
line
shape (2D)
texture
tone
colour
plane

contrast
proportion
scale
pattern
rhythm

spatial depth
force
direction
movement
volume, mass,
weight
balance
symmetry
structure
form (3D)
surface properties
observer's
position(s)/mood,
attitude

The combinations in the above chart are of course universal. They can be seen at work in all visual imagery in every culture. But how these combinations come to represent experiences of the world is very much culture-specific.

For the final drawing, you are asked to emphasise not the appearance or mood of things, but the abstract composition of your drawing, based on proximal values such as the balance and symmetry of a plant, the rhythmic pattern of a lizard's skin, or perhaps the contrast between the geometry of the Plantasia building and the organic forms within.

***WORK REQUIRED: 1 finished drawing (minimum)**

Enjoy your visit

Howard Riley
Senior Lecturer in Visual Studies

Notes for the slide-talk introducing the three functions of pictures

1. *Standard of Ur* Sumerian 2500BC

Example of how compositional choices serve to position the viewer (as onlooker rather than participant) and record the narrative in a linear fashion. Leaders at the top, seated. People queue to offer their spoils of war

2. Niccolo di Liberatore *Triptich: Christ on the cross* c1487

Different compositional choices position the viewer variously through time and space. Less linear in narrative structure, with the climax to the story depicted top centre, the apex of a compositional triangle.

3. Duccio *The annunciation* late 1300's

4. Fra Angelico *The annunciation* c1437

5. Zanobi Strozzi *The annunciation* 1440

6. Botticelli *The annunciation* 1490

7. Carlo Crivelli *The annunciation with St Emidius* 1486

This series illustrates how the same story may be told with different emphasis on pose and colour so as to affect the viewer's mood and attitude. Notice none of these changes the viewer's physical position. The central pillar serves to divide the spiritual from the material. Only Botticelli dares break the convention, replacing the column with a centrally-placed background architecture. The viewer's attention is kept, since the angel's left (front) hand appears to rest upon the (background) edge. Enhances the mystery of the narrative?

Crivelli's picture entwines several narrative strands.

8. Luca Signorelli *The flagellation* c1500

9. Piero della Francesca *The flagellation* c1460

These two illustrate the same story, but – Signorelli confronts the viewer directly at the climactic moment, whilst Piero plays with the viewers, inviting them to eavesdrop on the group on the right, before tempting them with perspective into the depth of the space. Here the shock of the flagellation is heightened.

10. *Diagram of the composition of Piero*

Such an analysis of the visual forces at work in Piero's composition may lead a picture's emphasis away from representation and towards composition itself.

11. Kazimir Malevich *Suprematist study* 1915-16

He appears supremely indifferent to the outward appearance of an object-filled world, and instead invited the viewer to feel the forces of weight, tension etc. which actually form the material world.

12. Piet Mondrian *Broadway boogie-woogie* 1942-3

Beware! Here is a painter apparently foregrounding the compositional function. But doesn't this image remind you of something? The rhythm of traffic? If viewers position themselves above the streets, then the regular rhythm of yellow cabs may be heard, boogie-woogie style, 1940's New York.



1

2



3



4

5



6



7

8

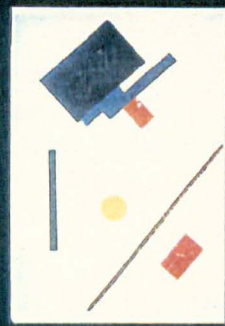


9



10

11



12



VISUAL STUDIES

Drawing: Seeing and Believing

Introduction

This is a project in which to explore and invent ways of representing relationships within space-time.

Everyone assumes that we express our individual perceptions and feelings in drawing, but it is important to recognise that we inherit those ways of seeing and structures of feeling from our cultural upbringing. They are part of our shared underlying beliefs, an ideology we take for granted, and they are made visible through drawings.

We draw what we see; but what we see is conditioned by what we believe: therefore we draw what we believe

Other cultures have different belief-systems, and different ways of representing them in drawing:

Some different beliefs/understandings made visible in Drawing

1. **Relationships between viewer and world**
 - a. Viewer static, world static
Jan Vrederman de Vries 1604 Perspective
Students' drawing s1984 Perspective
 - b. Viewers moves, world static
Rynen 1330 Shinto shrine
David Hockney, 1980 Nichols Canyon
 - c. Viewer static, world moves
David Bomberg 1912 The mud bath
Umberto Boccioni 1912 Elasticity
 - d. Viewer moves, world moves
Mikhail Larionov 1913 The cockerel
Natalia Goncharova 1913 Blue-green forest

2. Relationships between artist and world

- a. Artist isolated from natural environment
Ginger Riley Munduwalawala 1992 My country
- b. Artist integrated within natural environment
Jimmy Pike 1986 Two men at a waterhole

3. Relationships within societies

How societies are structured according to status, and how the levels of status are represented in drawings through the manipulation of relative size and position within the picture plane.

Nujum al-Ulum 1570 Throne of prosperity
Duccio 1311 Jesus opens the eyes of the blind man
Akbar Crossing the Ganges
Mughal 1590 Celebrating the birth of Prince Salim
Tosa Mitsuoki 1650 The tale of Genji

4. Beliefs about what Realism means

- a. Reality as the surface appearance of objects in space
Claude Monet 1891 Two haystacks
George Seurat 1885 La Grande Jatte
- b. Reality as the underlying structure of things, or the relationships between objects and events.
Dick Tetnjan Man hunting kangaroo
Kazimir Malevich 1916 Supremus N56
Patrick Heron 1971 Very complicated reds, with emerald and orange
Kenneth Martin 1980 Chance, order, change
Kenneth Martin 1984 Duo (immobile – mobile)

5. Beliefs about Time

- a. Time as the linear progression of discrete moments
David Hockney 1967 A bigger splash
Master of Delft Scenes from the Passion
Francis Bacon 1970 Three studies of a male back
- b. Time as non-linear
The past and future conceived within the present. Hopi Indians have no tenses in their language. Australian Aborigines talk about Dreamtime, in which there is no

distinction between people, animals, and features of the landscape, and no distinction between past, present and future.

Sassetta 1430 The whim of St. Francis to become a soldier

Giovanni di Paolo 1420 St. John the Baptist retiring to the desert

David Hockney 1984 A visit with Christopher and Don

David Hockney 1985 Terrace without shadows

Invent your own belief-system about space – time, invent your own system of notation for the human activities that happen within it, and draw what it looks like

Interesting Reading

WHORF, B.L. c1936 An American Indian model of the universe. In CARROLL J.V. 1956 Language, thought and reality. Selected writings of Benjamin Lee Whorf. M.I.T., Cambridge, Mass.

GIEDION, S. 1960 Space conception in prehistoric art. In CARPENTER, E. & McLUHAN, M. (eds.) Explorations in communication. Beacon Press, Boston, Mass.

TYRWHITT, J. 1960 The moving eye. In Explorations in communication, (see above)

LEE, D. 1960 Lineal and non-lineal codifications of reality. In Explorations in communication (see above).

Howard Riley
Senior Lecturer in Visual Studies





PROPOSAL FOR A NEW MODULE IN VISUAL STUDIES

LEVEL 1 SEMESTER 2

1. Introduction

This module is a pilot module, forming part of a research programme in the practice and teaching of drawing.

2. Aims

To introduce the rudiments of a computational theory of visual perception through practical drawing exercises.

To introduce systems of geometry developed from viewer-centred and object-centred descriptions of the world.

To demonstrate through drawing exercises the relationships between primary geometries and secondary geometries.

To increase student's range of responses in terms of drawing.

3. Objectives/Outcomes

Upon completion of this module, the student will be able to:

- (1) Demonstrate through drawing practice an awareness of how cultural beliefs about the relationships between the individual and their positioning in space affects the geometries of drawing systems.
- (2) Demonstrate how notions of individuality of expression arise from an amalgam of perception theory and related systems of geometry.
- (3) Demonstrate an understanding of the transformational process from 'scene-primitives' to picture-primitives'.
- (4) Demonstrate a wide range of drawn responses to the experience of perception, emotion, and imagination.

4. Mode

A series of practical drawing exercises in studio and elsewhere, interspersed with illustrated seminars. 3 hours per week for 15 weeks.

5. Pre-requisites

Co-requisites

6. Sample Topics

Geometries of vision. An exercise which explores primary geometries, secondary geometries, in relation to viewer-centred and object-centred drawings.

Gesture and empathy. How notions of individual expressive responses to subject matter may be broadened through a combination of perception theory and geometry systems.

- (a) Expression of the vulnerability of the life-model in a studio environment
- (b) Empathetic expression through drawing of the physical tensions in the model's pose

Transformations. From 'scene' to 'picture'. An exercise which introduces and explores the differences between 'scene-primitives' and 'picture-primitives'

Slices through time. Drawing exercise which explores synchronic and diachronic analyses of objects and events.

7. Assessment Methodology and Criteria

The students' attitude to specific issues covered in the module is elicited before and after the module is delivered, by means of semantic differential tests. Any perceived change in attitude may then be assessed as positive or negative according to criteria laid down beforehand.

8. Suggested Reading and Reference List

This module is primarily one of practical drawing. However, students are strongly encouraged to underpin their practice with an understanding of the theoretical issues articulated in the following texts:

- | | |
|-------------------------------|---|
| Marr, D. 1982 | <u>Vision.</u> W. H. Freeman, New York.
152.1401854 MAR |
| Dubery, F. & Willats, J. 1983 | <u>Perspective and other drawing systems.</u> The Herbert Press, London |
| Willats, J. 1997 | <u>Art and representation.</u> Princeton U.P., New Jersey |
| Petherbridge, D. 1991 | <u>The primacy of drawing. An artist's view.</u> South Bank Centre, London. |

Other texts that support the module:

- | | |
|---|--|
| Freeman, N. H. & Cox, M.M.
(eds.) 1985 | <u>Visual order: the nature and development of pictorial representation.</u> Cambridge U.P., Cambridge |
| Lange-Kuttner, C. & Thomas G.V.,
(eds.) 1995 | <u>Drawing and Looking.</u> Harvester Wheat Sheaf, Hemel Hempstead, Herts. |

Hagen, M. A. (ed.) 1980

The perception of pictures. Vols. 1 & 2. Academic press,
New York

Thistlewood, D (ed.) 1992

Drawing research and development. Longman/NSEAD,
Harlow, Essex.

VISUAL STUDIES

Geometries of vision

This project encourages you to explore through drawing a variety of geometries. Every representation of a scene makes use of some kind of geometry.

Primary geometry refers to the angles and directions of projected lines from the scene to a plane of projection. Any system of projection which utilises primary geometry (i.e. the geometrical relationships that occur outside the eye) may be understood as a *viewer-centred* representation.

Examples are perspective projection, isometric projection, oblique projection etc. These are illustrated in the slide talk.

Secondary geometry refers to the relationships between the lines, angles and shapes made on the drawing surface itself. You may choose to represent information about the scene which is not visible from a single, static viewpoint. For examples, back views and side views incorporated in a drawing of the front view of the model. Such drawings which allow a fuller understanding of the total structure of the object viewed may be termed *object-centred* representations.

Drawing exercise

Make two drawings, edges only of the studio set-up.

1. From a fixed viewpoint to described the relationship between the edges you can see.
2. From information gathered by moving around the set up. This drawing should reveal the way all edges of the set-up are related.

Howard Riley
Senior Lecturer in Visual Studies

VISUAL STUDIES

Gesture and Empathy

This project revisits the three functions of visual communication, the representational, the interpersonal, and the compositional.

In particular, the interpersonal function is to be foregrounded: drawing which explores ways in which to visualise your attitude and feelings towards the subject-matter. Such drawing may then in turn affect the viewers' attitudes and moods.

Some suggestions:

- How would you compose a drawing which expresses the vulnerability of the life model in the studio environment?
- How would you express the model's feelings as the focus of attention, surrounded by many pairs of eyes, scrutinising and penetrating?
- How would you express the physical tensions within the model's body? Can you empathise with the model?
- How may you draw outside the conventions of geometry? How may you express an individuality within the drawing?

Expressionists have discovered that by distorting the visual elements in their drawings, a disturbance may be set up within the viewer.

**Howard Riley
Senior Lecturer in Visual Studies**

VISUAL STUDIES

Transformations from scene to picture

This project explores what is presented to the eyes as we perceive the visual world – the scene –, and how that scene is represented on the drawing surface.

Drawing is discussed as the process which transforms a 3-D scene into a 2-D picture.

Scene-primitives is the term used for describing the basic elements which constitute a scene:

- a zero-dimensional scene-primitive may be the point where three edges meet at a corner
- a one-dimensional scene-primitive may be an edge
- a two-dimensional scene-primitive may be a portion of a visible surface in the scene
- a three-dimensional scene-primitive may be the generalised volume-form of some complex 3-D object. For example, the 3-D scene-primitive of someone's bent arm may be described as two cylindrical forms whose longitudinal axes meet at a point.

Picture-primitives is the term used to describe the basic elements which constitute a drawing:

- a zero-dimensional picture-primitive may be drawn point representing an edge in the scene which is perpendicular to the eye.
- A one-dimensional picture-primitive may be a drawn line representing an edge in the scene running across the line of vision.
- a two-dimensional picture-primitive may be a drawn shape representing the projected shape of a surface in the scene.

Of course, there are no three-dimensional picture-primitives.

You are asked to contemplate the subject-matter set up in studio, in terms of its scene-primitives. How may the essence of this subject-matter be transformed into the secondary geometry of picture-primitives?

Consider, for example, the essence of the connections between surfaces before you. Notice when one surface edge overlaps another surface edge there is formed an angle where three tones are seen. The angle itself may be distilled in the drawing as a Y or a T junction. What would a drawing made up entirely of these picture-primitives communicate about the scene?

How may the denotation of the scene be embellished with personal connotation through the appropriate selection of picture-primitives?

Howard Riley
Senior Lecturer in Visual Studies

WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY
PERTH
WESTERN AUSTRALIA

MINI-FELLOWSHIP REPORT 1981

WHY WE DRAW

BY

HOWARD RILEY

SCHOOL OF ART AND DESIGN

ACKNOWLEDGEMENTS

Thanks are due to Paul Thomas, visiting tutor in drawing, and students of Foundation Design 1981 and also to Dr Keith Punch, University of Western Australia for the ways in which they assisted in the projects..

This report describes a study conducted during 1981 under the auspices of the Educational Development Unit (EDU) at the Western Australian Institute of Technology. It was supported by an award under the EDU's "Mini-Fellowship Scheme," which is funded from the Academic Staff Development Fund.

The "Mini-Fellowship Scheme" which was inaugurated in 1973, and is part of WAIT's programme for the development of academic staff. The scheme is designed to give encouragement to staff to undertake investigative studies or projects in connection with their teaching. It is expected that when staff become involved in teaching experiments, or in exploring educational issues, this will improve their effectiveness as tertiary teachers. Furthermore, quite apart from personal professional growth for teaching staff, mini-fellowship projects frequently aim to solve particular educational problems existing in departments. They therefore have potential practical application in other departments, within the same school and within other schools.

The Scheme is currently jointly co-ordinated by the EDU and the Computing Centre. Mini-Fellows maintain close contact with academic staff of these two areas, who act in an advisory and consultative capacity.

For this project, the consultant was Dr Norman Dennis.

LIST OF FIGURES

Figure 1.	The Creativity cycle in drawing	6
Figure 2.	Observational drawing. Howard Riley	8
Figure 3.	Three-dimensional illusion (Frisby 1979)	9
Figure 4.	Still life exercise. Helen Boughton	14
Figure 5.	Illusion (after Richard Smith). Howard Riley	16
Figure 6.	Drawing from natural form. Ian Weir	18
Figure 7.	Semantic differential attitude scales.	26
Figure 8.	Semantic differential attitude scales.	27
Figure 9.	Semantic differential attitude scales.	28

INTRODUCTION

The problem of how to draw is eliminated by the understanding of the nature of the subject-matter.

And that is a much more interesting problem.

SECTION 1 BACKGROUND TO PRESENT-DAY ATTITUDES

In 1637 the "Discourse on the Method and Essays" was published anonymously by Jan Maire of Leiden. It was Rene Descartes' first published work, and in it he laid down "the basis... on which all rationalised and systemised design methods have since been built".

(Broadbent 1973 p.60):

1. Accept as true nothing you do not know to be self-evidently true.
2. Divide each difficulty into as many parts as possible.
3. Conduct your thoughts in an orderly fashion, starting with what is simplest and easiest to know, and rising little by little to the knowledge of the most complex, even supporting an order where there is no natural precedence among the objects of knowledge.
4. Make so complete an enumeration of the links in an argument and study them all closely, that you are sure that nothing is missed.¹

Pause. Note the apparent paradox concerning design methodology: An approach which upholds objectivity, logicity and verifiability is entirely dependent on mental processes which are subjective and irrational.

1 Footnote

Paraphrased by Broadbent. Descartes' original is translated in "The Philosophical works of Descartes" by Haldane and Ross, Cambridge University Press. 1967 p.92.

This apparent paradox stems from what Arthur Koestler (1975) has rather bluntly called the cartesian catastrophe; the splitting up of the world into matter and mind, and the identification of "mind" with conscious thinking.

Before Descartes there was no urge to separate the unconscious from the conscious - everyone took for granted that unconscious thinking formed a part of mental activity; "the absence of a conscious perception is no proof of the absence of mental activity" (Plotinus, quoted in Koestler 1975 p.148).

After Descartes, many people felt obliged to explore the issue. Amongst those siding against him, Leibniz: "Our clear concepts are like islands which arise above the ocean of obscure ones" (Whyte 1962, p.93).

Kant, Hegel. Goethe: "Man cannot persist long in a conscious state, he must throw himself back into the Unconscious, for his root lives there..." (Whyte 1962, p.119).

...This reaction to Descartes' theory culminated in a cult of the unconscious, Freud building a lasting reputation upon them all-and consolidating the rift in the process.

Henri Bergson (1916) suggests the brain itself acts as a "reducing valve". The senses send an overwhelming flood of information to the brain (conscious and unconscious) which it filters, or reduces down to that required for survival. Modern Man has become so conditioned, so rational, so adept at reducing input to the bare minimum, that the flood becomes an insipid trickle. And Bergson says we have screened out the richest, fullest and most wondrous part of our experience. Without even knowing it!

William Blake's line that introduces Huxley's (1954) attempt to bypass this reducing valve has been a modern-day rallying cry against Rationalism:

"If the doors of perception were cleansed, everything will appear to man as it is, infinite."

That those answering the rallying call in recent times have often been categorised as radical and alternativist is an indication as to the strength of the roots of Rationalism.

It is not improper to suggest that the cartesian catastrophe is responsible for the prevailing attitudes in Western education; observe the lines drawn between areas of thought. (The so-called academic and non-academic disciplines). For many people, sadly, those boundaries are imposed very early in the course of education - and the activity of drawing is well and truly submerged in the rationalist-defined non-academic stream.

SECTION 2 DRAWING AS A WAY OF KNOWING

There is evidence of a concerned effort to redress the balance; Bruce Archer (1980) says there exists in Man...

"a distinct capacity of mind, analogous with the language capacity and the mathematical capacity. This is the capacity for cognitive modelling. A person acting in the role of designer, or appraiser of designs, forms images in the mind's eye of things and systems as they are, or as they might be..."

He goes on:

"These images are usually externalised through... drawings, diagrams, models, and of course where appropriate, language and notation. The externalisations capture and make communicable the concepts modelled".

Closer to home, a report on tertiary visual arts education in Australia (Parr 1980) has this to say on the same topic:

"When artists are preoccupied by the creation of purely visual statements, establishing relationships and deploying symbols and syntax that have to do primarily with the processes of visualisation and the liveliness of our tactile imagination, they deal with modes of awareness and exploratory thinking that are no longer highly developed in the majority of people in our society, although it has long been understood that such capacities are highly active in children and subsequently lapse for want of stimulation after the onset of formal schooling dominated by the written and spoken word."

Drawing can help develop this neglected mode of thinking related to what De Bono (1970) has called lateral thinking - (possibly inspired by Souriau's quote "pour inventer il faut penser a cote") - a capacity which is greatly eroded as we pass through the education system.

Drawing is of the utmost importance as a means of understanding, or knowing oneself and one's context. It is the most immediate pictorial record of thought. A means of developing self-awareness (as opposed to self-consciousness). Drawing is a language of more effective communication, richer expression. A source of enjoyment, satisfaction. Drawing is the way of thinking that expresses experiences in tangible, visual form where they can be understood, evaluated, refined, resolved with other inputs and communicated. Drawing is the process - not an end product (although of course the process may be fragmented and the segments isolated and displayed as if they were end products - a source of confusion for many a casual visitor to galleries.)

The activity of drawing can re-establish links within the multi-dimensional maze of mental sidetracks simply by slowing down our everyday, seeing-for-survival process, giving us slow-motion, cyclical perception, with time to question, experiment and explore the relationship between ourselves and that so-called reality outside our skins - a kind of meditation.

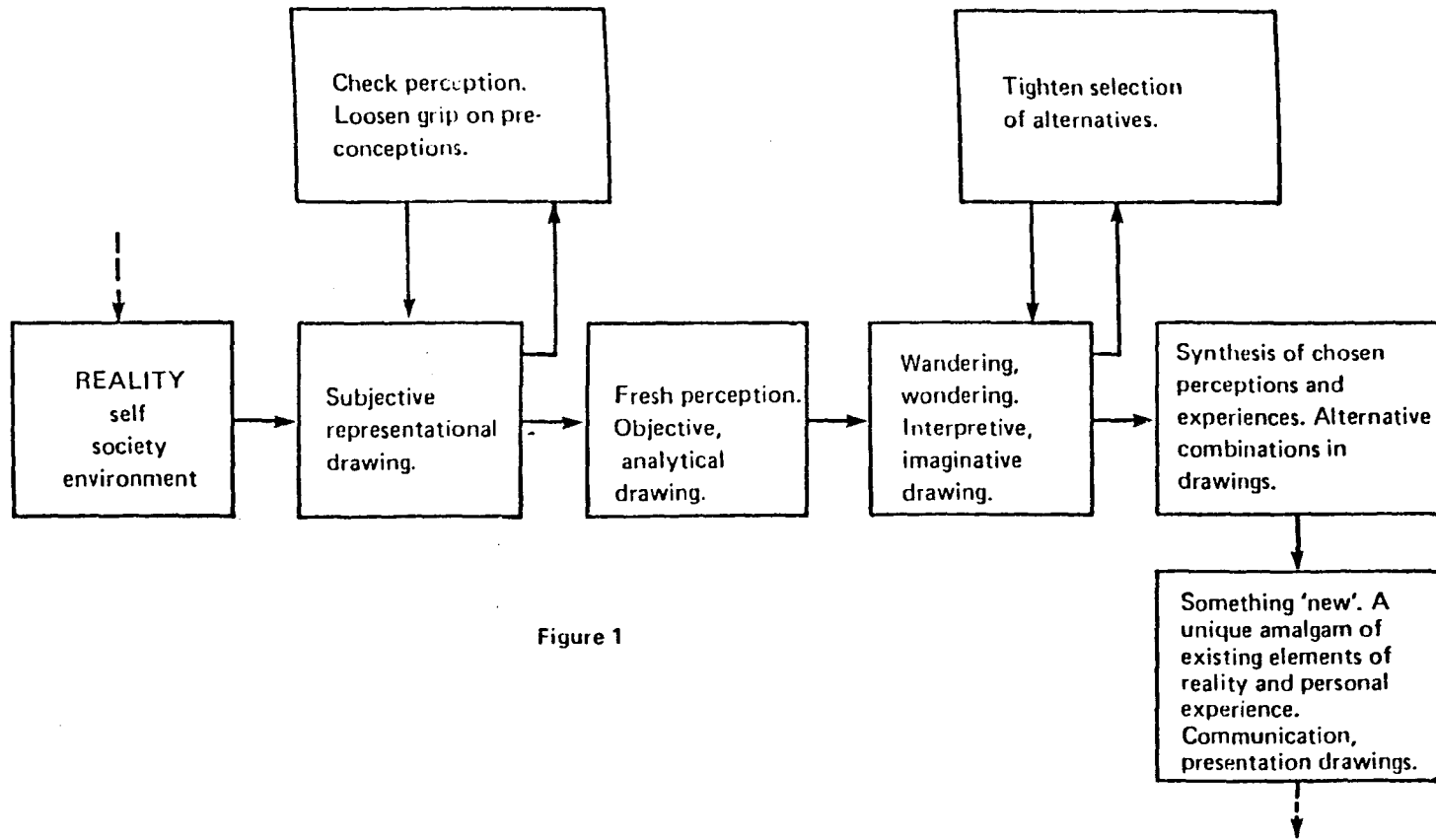


Figure 1

The usual cut-in point to this "creativity cycle" (which of course is not as two-dimensional as Figure 1 implies) is representational drawing (Figure 2). Concentrated observation and assessment of the subject's structure, proportions, form, surface texture, colour, - which will eventually and naturally lead to wondering and wandering on paper. Surmising through drawing.

Imaginative, loosely interpretive drawing leads to an awareness of the existence of alternative ways of seeing (perceptions), and combinations of those alternatives in drawing form allows unique amalgams of existing elements of "outside reality" and "inner-self reality" to be explored. Something "new" which may ultimately become the starting point of another cycle...

The constant questioning of our perceptions (are your eyes telling you lies?) loosens the grasp on our preconceptions, and helps us become aware of the alternative ways of seeing. Figure (3) is a simple example of what that can mean in a physiological sense. By refocussing your eyes to some way through the page, it is possible, with concentration, to see a surprisingly strong 3-D effect from the combined image of the two squares (Frisby 1979). The ability to change lenses on our mind's eye gives us a wider/deeper understanding of our potential to question, relate to and understand our world. Desirable in everyone, but a prerequisite for artists and designers.

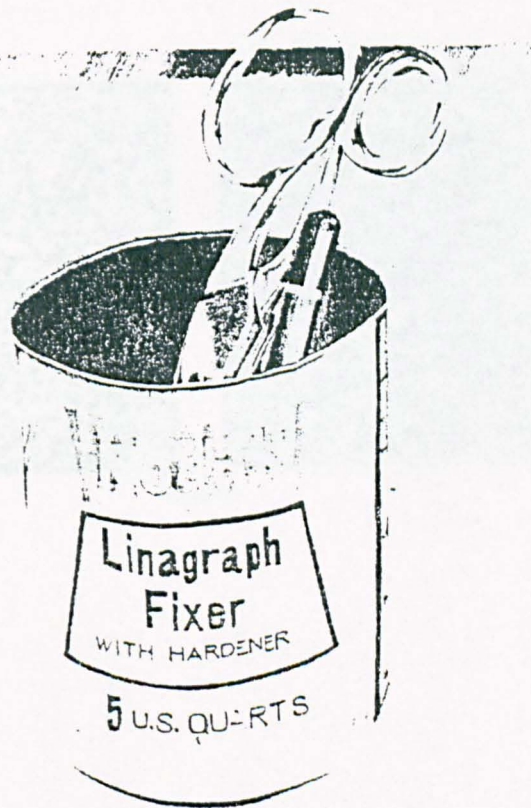


Figure 2

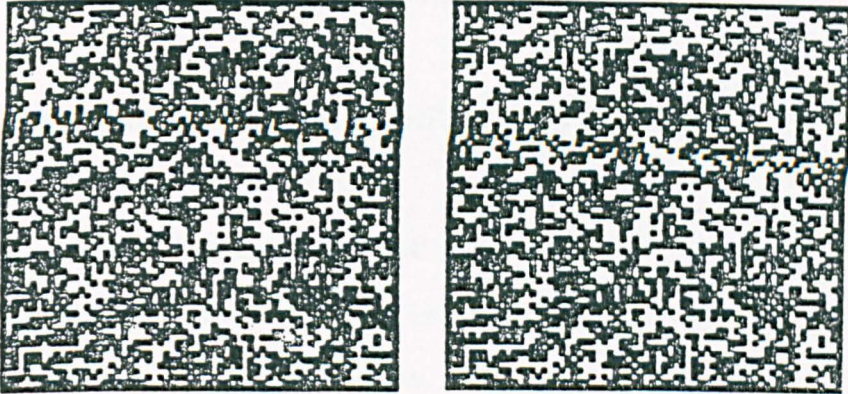


Figure 3

At this point, having spoken about the need to test and question our perception (and preconceptions,) to achieve new ways of construing our visual experiences, it may be of value to draw a parallel with Popper's (1959) line of scientific progress as a testing, and subsequent refuting, of hypotheses.

But the aim of science, broadly stated, is prediction and control.

The aim of drawing is to put understanding to the test and to seek flexibility, freedom, through deeper understanding. Control in the rigid sense should not be an aim.)

SECTION 3 REASONS FOR RESEARCH INTO DRAWING

Drawing is not mystical, the preserve of the "gifted" or worse, "talented". (Skill is to drawing as neat handwriting is to poetry. Desirable, even functional, but not of the essence.) Equally, drawing as defined here is certainly not effortlessly available, to be picked up as a package of knowledge. There is more to drawing than meets the eye...

The desire to explore these hidden facets of drawing led to this present work, which uses drawing itself to educe and clarify for present and prospective students, for myself and anyone else interested, how we come to make sense of things.*

The project sets out:

1. To reinforce the relationship of drawing to design activity as a means of expanding awareness and generating ideas visually.
2. To define the aims and objectives of an introductory drawing programme for students of the crafts and design areas, and measure the relevance of those in relation to staff and student expectations of the programme.

* Educe. A word from the Latin duco, draw. It means to bring out, develop; infer a conclusion from data.

3. To identify the criteria by which drawing can be assessed at first year level, and to develop teaching methods so that a critical approach based on those criteria becomes the foundation of the students' various ways of approaching design problems as well as the means of assessing end products.

4. To record on video some of the activities taking place in the drawing studio, providing a focal point for discussion in the high school, at WAIT and anywhere else of relevance.

SECTION 4 RESEARCH PROPOSALS, DESCRIPTION OF PROGRAMME

The work explores this fundamental hypothesis:

That the activity, contemplation and discussion of drawing can increase the student's and tutor's capacity for

- a) co-ordinating and refining apparently conflicting perceptions, usually between rational and empirical viewpoints, and
- b) cross-relating ideas from the twin spectra of personal experience and academic experience

so that the resultant syntheses can help lead to valid design solutions/visual statements.

This implies that education in art and design is to do with the development of methods of cognitive modelling - ways of structuring experience - more than the inevitable and by no means undesirable accumulation of technical information and manual skills.

In a series of studio-based projects which took up four hours each week throughout the fifteen week semester, students were sometimes faced with an arrangement of familiar, everyday objects and encouraged to compare what they knew about those individual items with what they saw in front of their eyes.

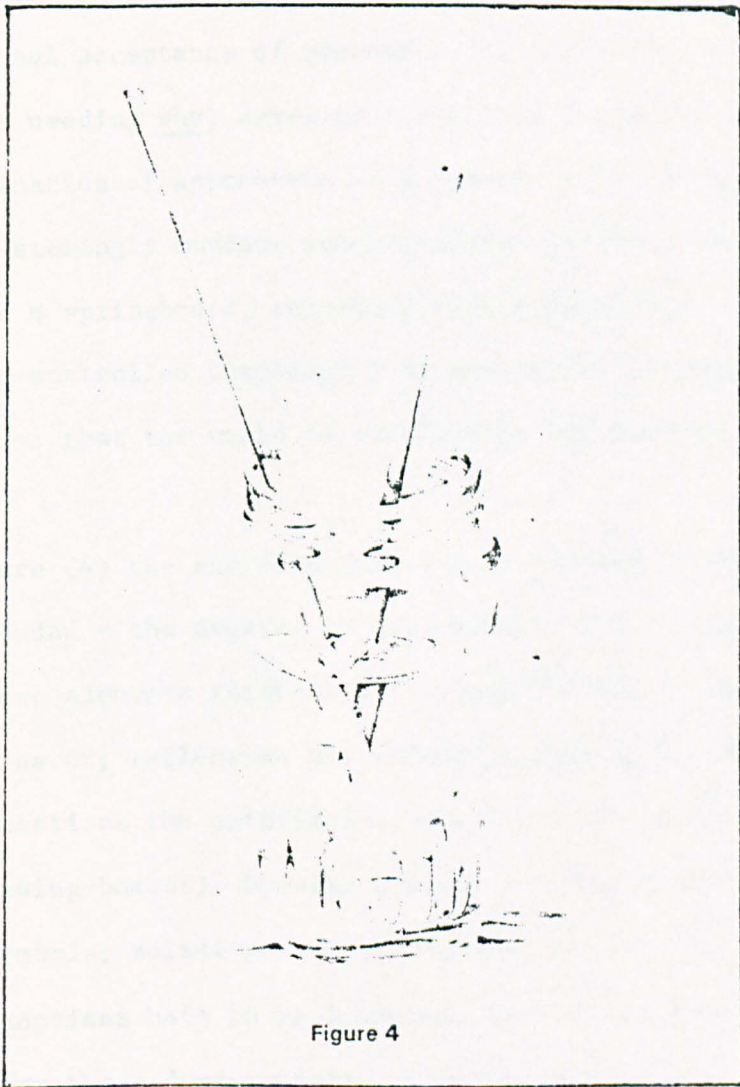


Figure 4

The switch from the rational basis of understanding to a kind of a-rational acceptance of phenomena (eg stability, reflections are without needing why) develops a spectrum of perceptions which allows a combination of approaches as an exercise in thinking and seeing. So the seemingly mundane subject matter of the drawing studio becomes a springboard, releasing both student and tutor from the tightly-controlled complacency of seeing we all use to assure ourselves that the world is predictable and controllable.

In Figure (4) the stereotypical way of drawing in outline has been transcended - the drawing is essentially of air, glass, water, and how those elements interact with opaque solids (drinking straws in a jar of water; reflection and refraction project). Drawing such as this questions the existence of outlines (do lines exist away from the drawing-board?) Drawing probes the meaning of taken-for-granted word-symbols; solidity, stability, texture, colour and space. Preconceptions have to be loosened, and of course at the same time there are those fundamentals of design to consider:

The composition of the marks on the paper - the sheet of paper seen as a three-dimensional corridor of space - the proportions and scale of the image, its illusion of depth on a two-dimensional surface (Figure 5). All this is an exhausting and often disquieting experience for the recent high-school student with "drawing ability", but on that develops agility of thought.

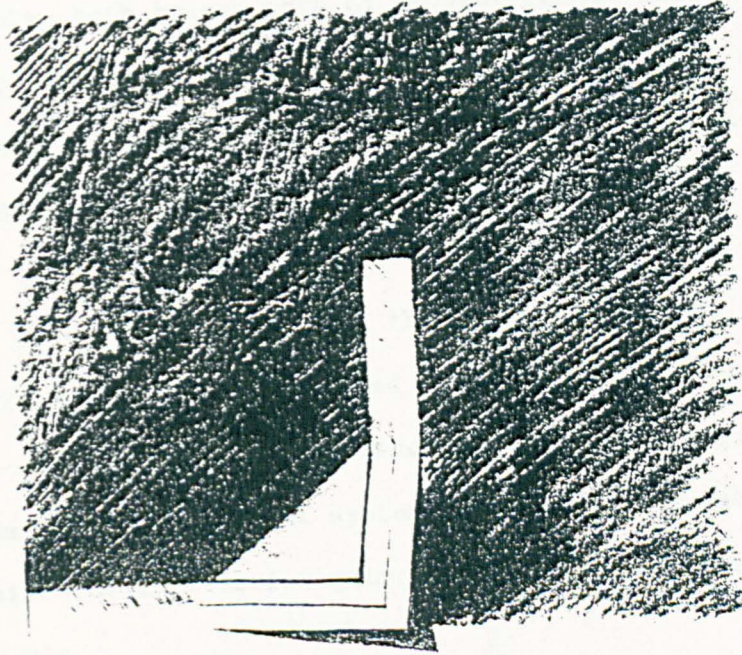


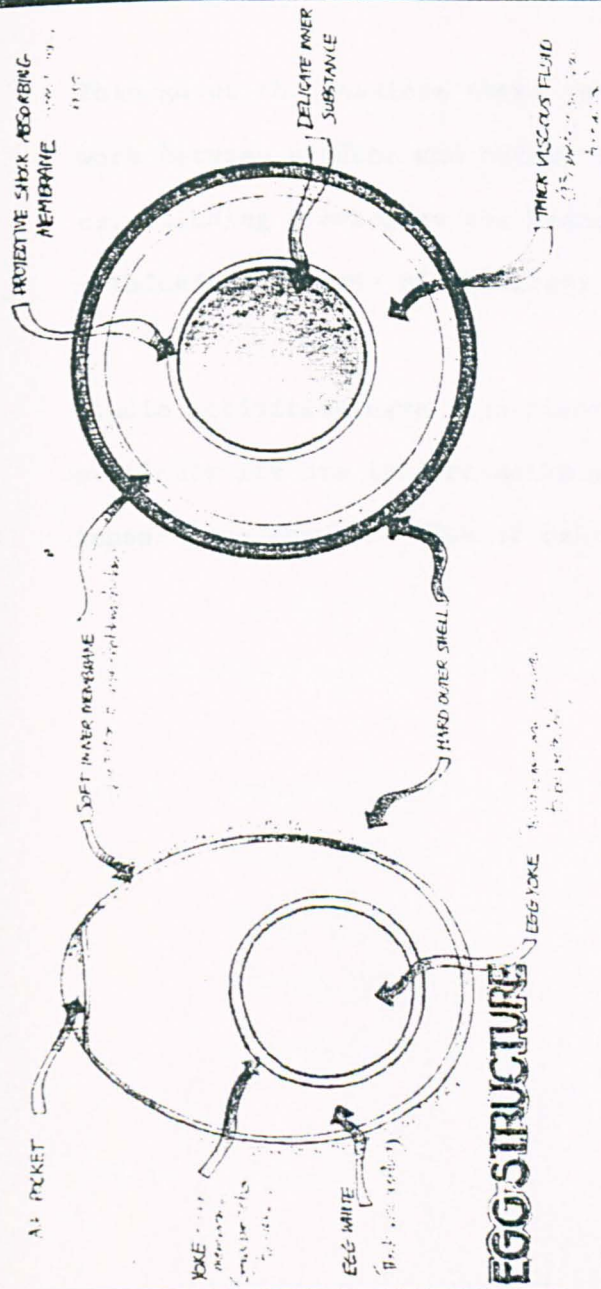
Figure 5

Other projects encouraged students to draw from the wealth of their own experiences, apply those insights to notions and objects presented in isolation or taken out of normal context with no importance or specific meaning attached, so that tangibles and intangibles both become part of an exploratory thought process, visually recorded. These "exercises in floundering" as they were to become known, relate directly to the professional situation of the artist/designer confronted by a new problem.

A third category of project in the drawing programme, a kind of combination of the two described above, provided opportunities to explore and analyse natural structure and form, to identify, isolate and communicate functional systems, later to translate and synthesise the information gained to produce man-made design ideas (Figure 6).

Often these exercises led the student to explore and research within other disciplines on and off campus, to experiment with a range of materials introduced in other units of the course, and to incorporate a range of image-making techniques including photography, photocopying, screenprinting.

THE PROTECTIVE SHELL



DEVELOPMENT

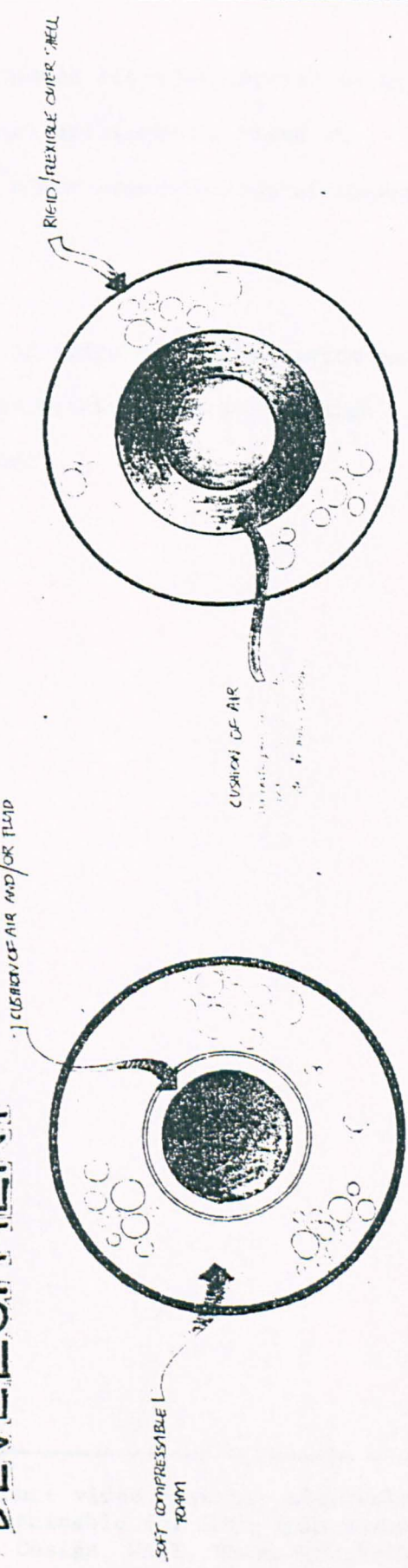


Figure 6

Throughout the sessions there was constant dialogue centred on the work between student and tutor, student and student, aimed at establishing drawing as the means of clear communication of thought - indeed as a means of thinking.

Studio activities have been recorded on video and the cassette is available for use in discussion groups within WAIT, in the high schools and anywhere else of relevance.¹

¹ Footnote

("Why We Draw". 30 minute video cassette available in VHS and U-matic. Obtainable for loan from Howard Riley, School of Art & Design, WAIT, Phone 350 7900).

SECTION 5 EVALUATION PROCEDURES AND DATA OBTAINED

Description of the Nominal Group Technique

The NGT was used to evaluate the student group's attitude and expectations of the introductory drawing programme, at the very start of semester 1, 1981.

Basic steps of the NGT (Pre-test) (Done, Lonsdale, 1979)

Step 1. Silent generation of ideas in response to the focal question "Why do you draw?" The wording of the question is critical, it is clearly a fairly general question which allows students to answer in a wide variety of ways. However, it must also be answerable in very specific terms.

Step 2. Collection of ideas

Each student was asked in turn to summarise one response from his or her working sheet. This response was written on a display board. Procedure continued until all ideas generated by students had been recorded in full view of the entire group. Duplicate items were listed once only; if an item on a student's list had already been provided, he or she was asked to provide another listed item. During this stage no discussion or reaction concerning the item was allowed.

Step 3. Discussion for clarification of listed items

The purpose is to enable each student to understand each of the items sufficiently to enable a decision concerning their relative importance. During this stage, students had the opportunity to question, defend, debate or clarify any of the items listed on the wall.

Step 4. Student ranking of displayed items to indicate relative importance

Students privately selected the five listed items which in their view were the most important. They used five small cards on which to record these items, one per card. Subsequently they were asked to rank these five items in order of importance, indicated as below:

item No. 13
Keyword-skills
ranking 2

Cards were collected and analysed by allocating points for each occurrence of a particular item so that it was possible to produce a ranked list of seven items which reflected the group's overall response. This is tabled as the NGT PRE-TEST results :

Why We Draw:

1. To develop drawing skills
2. Because drawing is the basis of design activity
3. To communicate ideas
4. To increase awareness, perception
5. To record observations of surroundings
6. For enjoyment
7. To express personal mood or emotion.

NGT Post-Test

At the end of the semester's programme, the group (total 55 students) was asked to rank these seven items which were presented in random order. Response is tabled as NGT Post-Test results:

NGT Post-Test Results

Why We Draw:

1. To increase awareness, perception
2. To communicate ideas clearly
3. Because drawing is the basis of design activity
4. To record observations of surroundings
5. To develop drawing skills
6. For enjoyment
7. To express personal mood and emotion.

During the semester, staff teaching on Design and Fine Art courses were also asked to rank the random items generated by the NGT Pre-Test.

Why We Draw

Design Staff (9) Responses

1. To increase awareness and perception -
2. To communicate ideas clearly
3. Because drawing is the basis of design activity
4. To record observations of surroundings
5. To develop drawing skills
6. For enjoyment
7. To express personal mood and emotion

Fine Art Staff (7) Responses

1. To increase awareness and perception
2. To record observations of surroundings
3. To communicate ideas clearly
4. To express personal mood and emotions
5. To develop drawing skills
6. For enjoyment
7. Because drawing is the basis of design and activity

Overall Staff Response

Student Post-Test Response

Why We Draw

1. To increase awareness and perception
2. To communicate ideas clearly
3. Because drawing is the basis of design activity
4. To record observations of surroundings
5. To develop drawing skills
6. For enjoyment
7. To express personal mood and emotion

Why We Draw

1. To increase awareness and perception
2. To communicate ideas clearly
3. Because drawing is the basis of design activity
4. To record observations of surroundings
5. To develop drawing skills
6. For enjoyment
7. To express personal mood and emotion

Semantic Differential Attitude Scales were used to compile profiles of the groups' attitudes to drawing, the discussion of drawing, and the assessment of drawing.

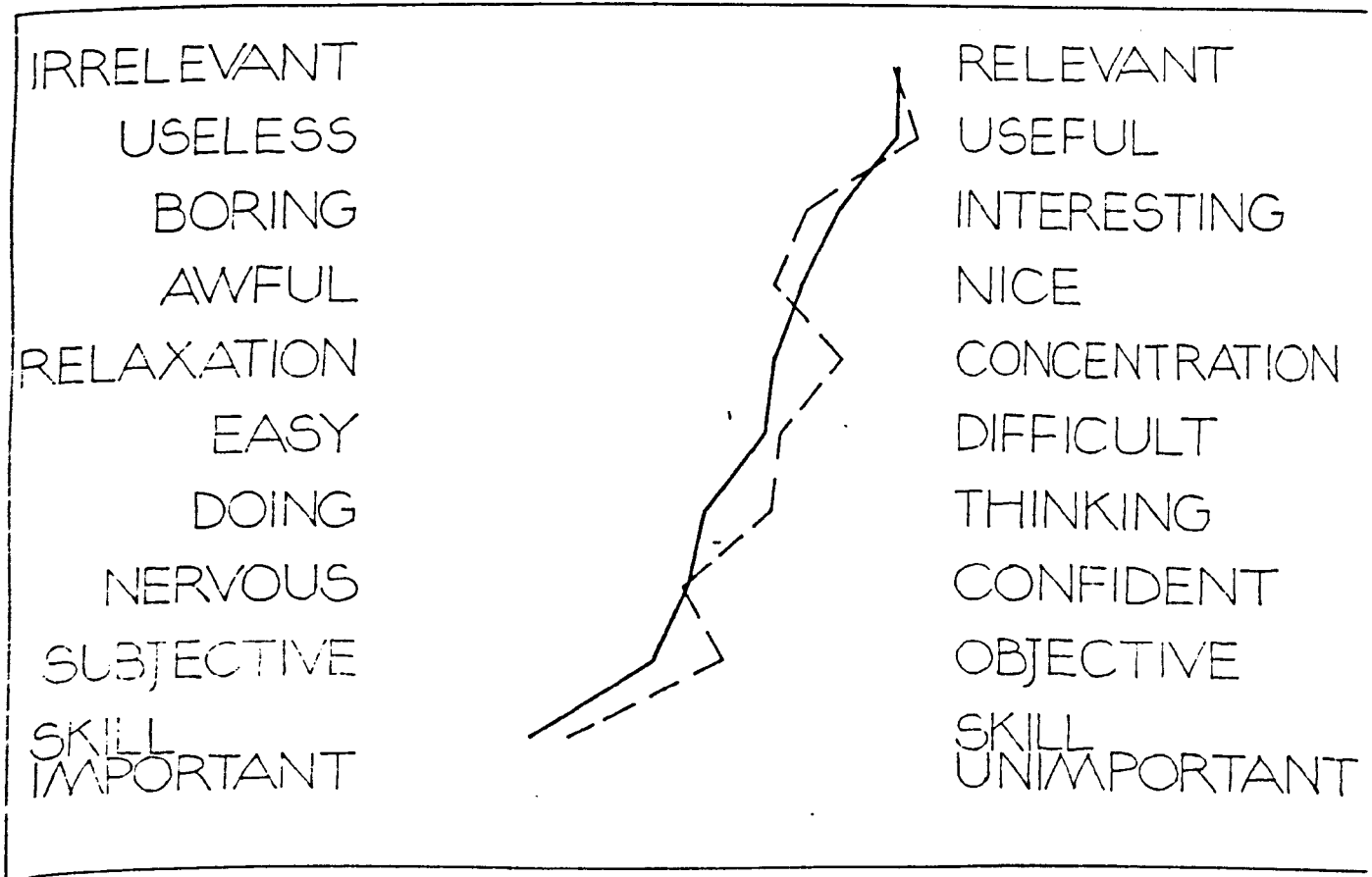
Figures 7, 8 and 9 illustrate the format of the booklet of semantic differential scales given to each student before and after the semester's drawing programme. They also indicate the resulting group profiles.

Profile showing student group's attitude to

'DRAWING'

Profiles of group's attitudes

to Drawing



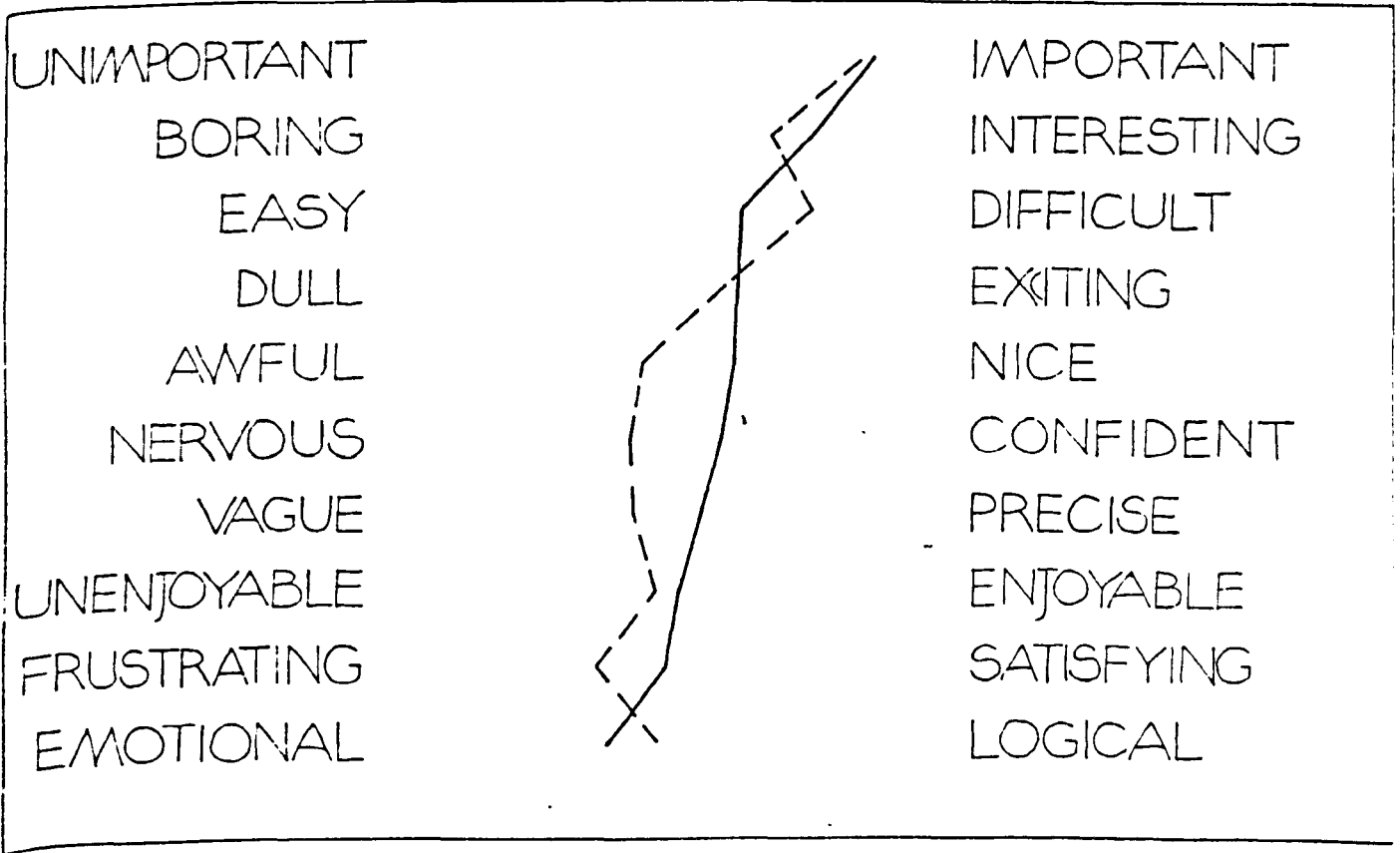
————— Before programme

- - - - - After programme

Fig. 7a

'DISCUSSING DRAWING'

Profiles of group's attitudes
to discussing Drawing



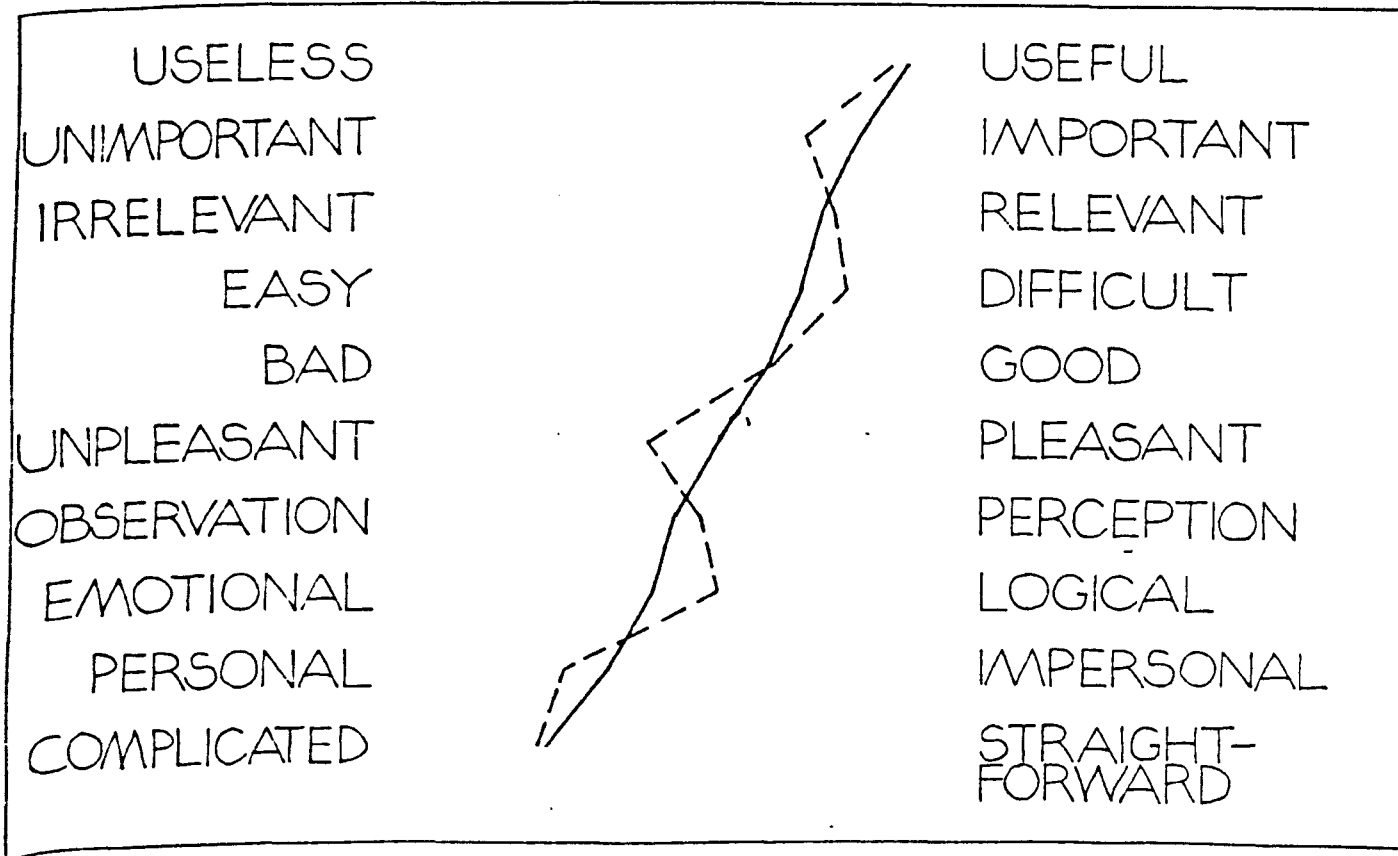
———— Before programme
----- After programme

Fig. 8

'ASSESSING DRAWING'

Profiles of group's attitudes

to assessing Drawing



————— Before programme

----- After programme

Fig. 9

SECTION 6 CONCLUSIONS AND RECOMMENDATIONS

Initial Conclusions

1. A more positive attitude to drawing has been achieved in the group (Positive as defined by staff).
2. On average, the views of the teaching staff coincide with the attitudes of the students who have completed the first semester drawing programme, with regard to the aims and objectives of the programme.
3. The group perceives drawing more as a thinking process than as a technical skill. It is aware of the relevance and usefulness of drawing when applied to design activity.
4. In the light of this increased awareness, and the implication that clear criteria of self-assessment are important, the group's early complacency surrounding the assessment and discussion of drawing has been seriously challenged.

A note on the assessment of drawing

In the first year drawing programme, the main aim is to help the student become aware of the design potential of combining "out-WAIT" personal experiences, "in-WAIT/school" academic experiences, and rational/empirical observations through drawing. A corollary of this aim is the acquisition of a critical faculty which enables the student to decide whether any of the combinations of insights expressed in drawing has

- a) potential for use in specific design situations,
- b) stands as an accurate visual communication of what was perceived.

An so simply by asking the student to select, edit a series of drawings for display (a process of self-appraisal) and hearing an oral explanation of that selection process, it is possible for the group (students plus staff) together to arrive at an assessment of achievement on the individual student's terms.

A more simplistic, analytical assessment may be carried out within the guidelines of the four main points used throughout the programme to lay down a common language for discussion.

Those four points are:

1. Composition

Has the relationship between figure and field been

2. Proportion

This can include the scale of the drawing as well as the relationship of its constituent parts. (Obviously more useful when discussing objective drawing.)

3. Understanding the inherent structure. This point can be illustrated by the student who drew her symbol of a bamboo plant as a self-contained stem with leaves attached - and then realised, by dismantling a segment of the actual plant, that the stem is the sum of the leaves - and drew it accordingly.

4. Illusion of depth in the drawing's surface

The observation and expression of aerial perspective.

¹ Footnote

Incidentally, no relationship was found between the "Field-dependent" and the "Figure-dependent" students, in terms of their ability to control the design fundamentals of composition. (Hidden Figures Test, Educational Testing Service, 1962).

COMMENTS AND RECOMMENDATIONS

It is clear to me that the results obtained from the various tests applied to the group may be interpreted in many ways. There is evidence that suggests students have actively expanded their range of awareness, and are capable of incorporating new perceptions together with their own individual experiences into design work through drawing.

The same data could also suggest that students are struggling to re-adjust their personal system of construing and relating those notions to do with drawing: That would explain the discussion and assessment of drawing being perceived with less confidence, more anxiety at the end of the programme. (See the Semantic Differential profiles Fig. 8 and 9.)

Is this a success then? Shaking the personal constructs of each individual student until we achieve an acceptance of the attitudes held by teaching staff? (See Nominal Group Technique results.)

Or may I interpret the data to mean that through the student's own activity within a questioning environment set up by the researcher, the student may flex his/her own personal construct system, thus testing and discovering the weak points for him/herself?

This could mean that the Semantic Differential Post-Tests reflect the group at a time when the outward signs of confusion are simply the result of a healthy self-discovery process.

REFERENCES

- ARCHER, B (1980) Design and technological awareness in education. From a paper by Professor Bruce Archer, Design Education Unit, Royal College of Art, London.
Art Education 300 - Notes No. 5 WAIT 1980
- BERGSON, H (1916) Le rire. Paris. F. Alcan 1916. Described in The pump house gang. Tom Wolfe. Bantam 1972 edition p.117.
- BROADBENT, G (1973) Design in architecture. London. Wiley, 1973.
- DE BONO, E (1970) Lateral thinking: Creativity step by step. New York. Harper and Row, 1970.
- DONE, M & LONSDALE, A (1979) The nominal group technique. Educational Development Unit, WAIT, 1979.
- FRISBY, J P (1979) Seeing. Illusion, brain and mind. Oxford University Press, 1979, p.79.
- HUXLEY, A (1954) The doors of perception. London Chatto and Windus, 1954.
- KOESTLER, A (1975) The act of creation. London, Pan, 1975.
- PARR, G (1980) Tertiary visual arts education in Australia. A report to the Visual Arts Board of the Australia Council by a study group under the chairmanship of Geoffrey Parr. Australia Council, 1980, p.13.
- POPPER, K R (1959) The logic of scientific discovery. London. Hutchinson, 1959.
- WHYTE, L L (1962) The unconscious before Freud. London. Tavistock, 1962.

APPENDIX C

Introduction

This appendix presents the results of a pilot programme designed to test the possibilities of a new approach to teaching drawing. The programme was conducted with the co-operation of two consecutive cohorts of students on the Foundation Diploma in Art and Design course, Faculty of Art and Design, Swansea Institute of Higher Education, 1996-97 and 1997-98.

The instruments of data collection were the Nominal Group Technique (NGT), designed to elicit responses to the groups' question 'why do you draw?' both before and after the teaching programme had been delivered, and a series of Semantic Differential Scales, designed to elicit students' attitudes towards aspects of drawing both before and after the programme.

Results of NGT

The top six ranked responses to the question 'Why do you draw?' are indicated in the tables below:

Semester 1 1996-97

Before programme (n=47)

1. To express emotions
2. For fun and relaxation
3. To record information
4. To visualise mental images
5. To communicate ideas
6. To explore perception

After programme (n=44)

1. To explore perception
2. To communicate ideas
3. To visualise mental images
4. To express emotions
5. For fun and relaxation
6. To record information

Semester 1 1997-98

Before programme (n=40)

1. To explore personal feelings
2. To explore things
3. { To record experience
To understand what we see
5. To communicate (share)
6. It's satisfying

After programme (n=40)

1. To communicate (share)
2. To explore things
3. To understand what we see
4. To record experience
5. To express personal feelings
6. It's satisfying

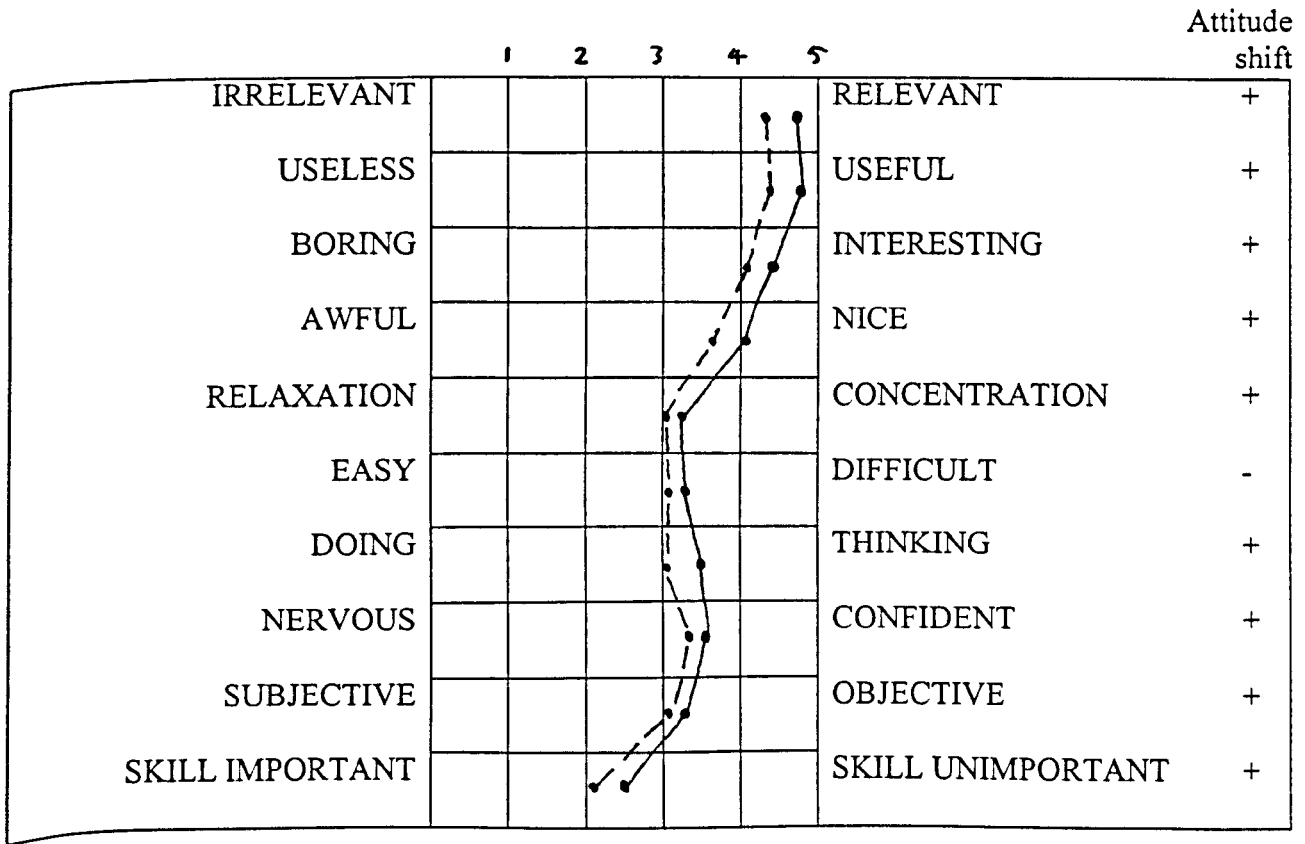
Both NGTs indicate a shift away from notions of *expressing* and *recording*, towards notions of *communicating* and *exploring perception*. These results indicated the potential of a new drawing programme for altering the attitudes of student groups.

Results of the Semantic Differential Scales

Three scales were constructed. One elicited responses to the student's attitude to drawing, one elicited responses to their attitudes to assessing drawings, and the third elicited responses to student's attitudes to discussing drawing. The results are indicated in the diagrams below.

Semester 1 1996-97 (n=47)

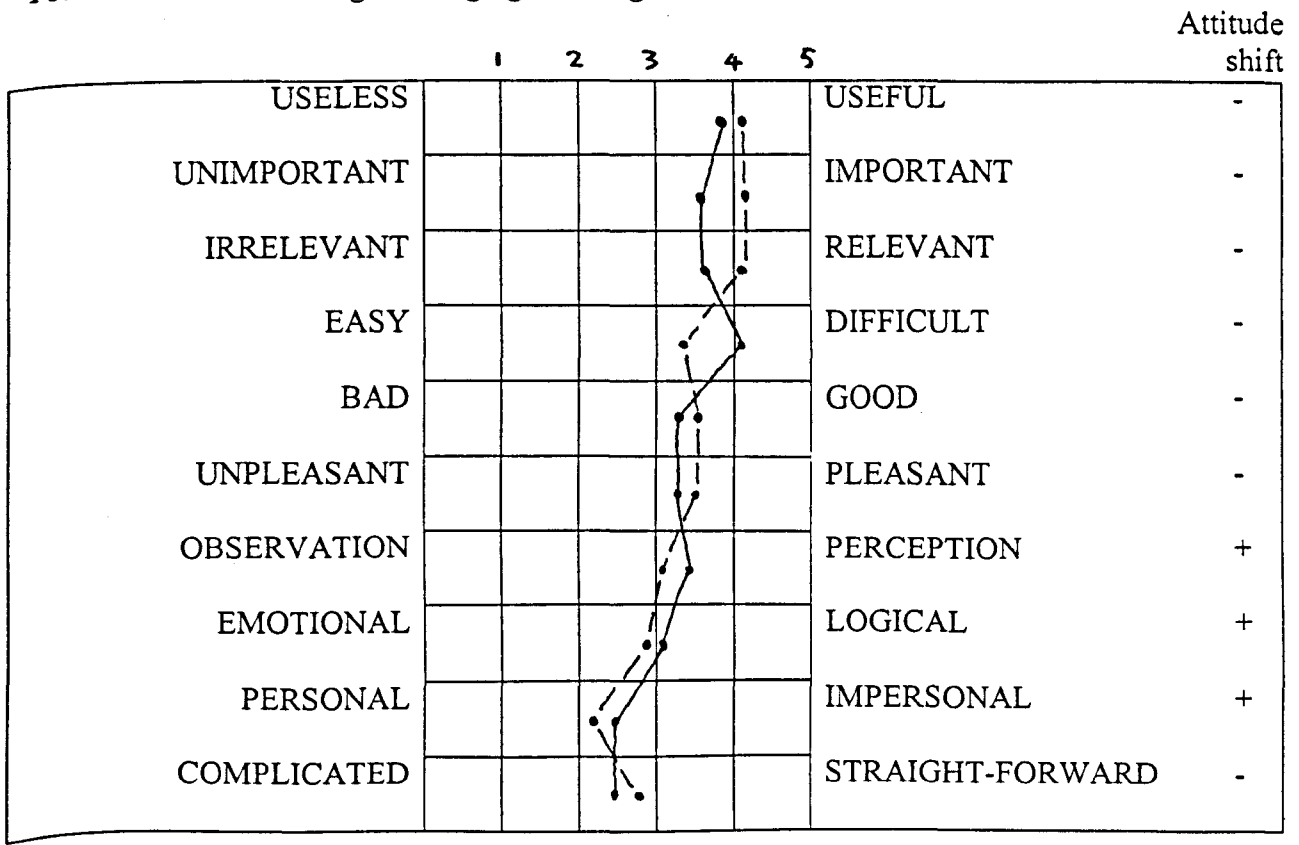
Your attitude to Drawing



Pre-prog ----- Post-prog _____

Semester 1 1996-97

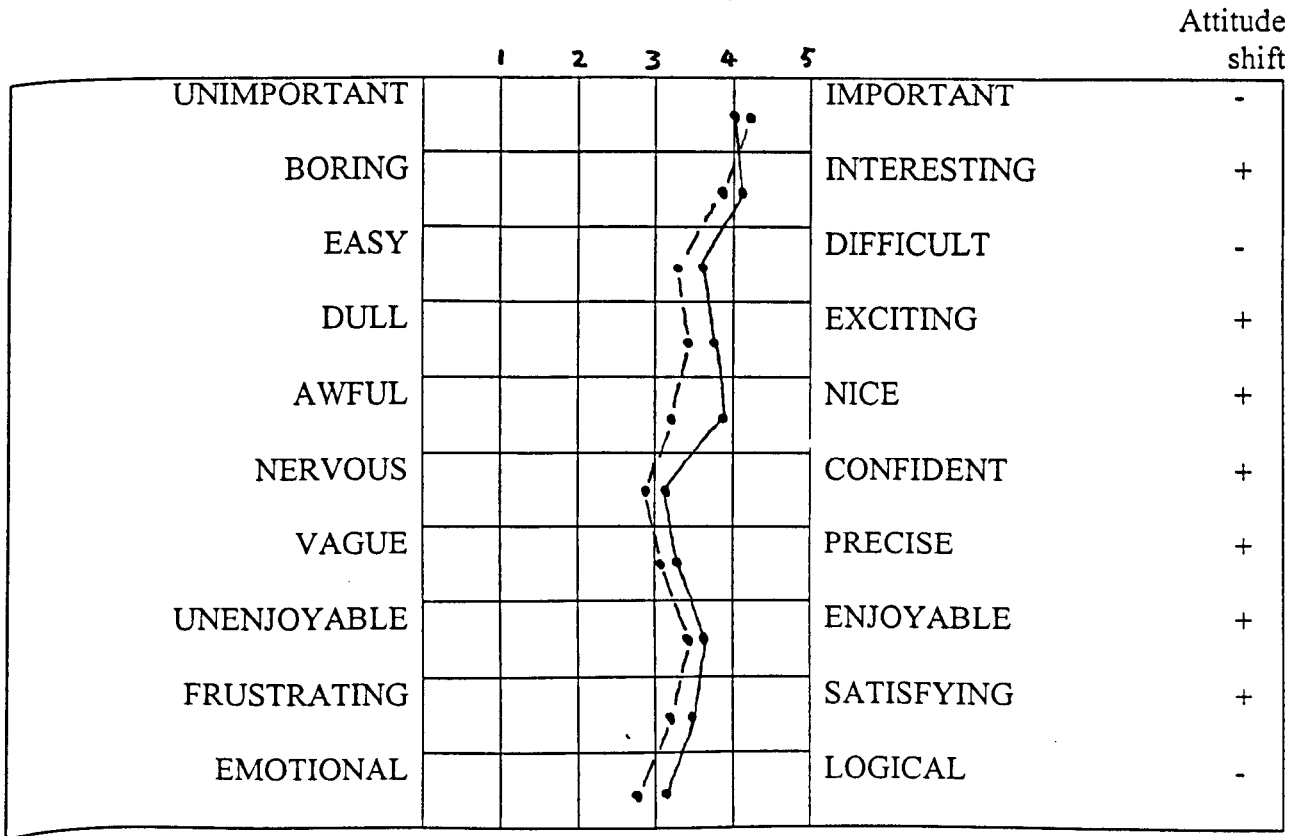
Your attitude to Assessing, or Judging Drawing



Pre-prog ----- Post-prog _____

Semester 1 1996-97

Your attitude to Discussing, or Talking about Drawing



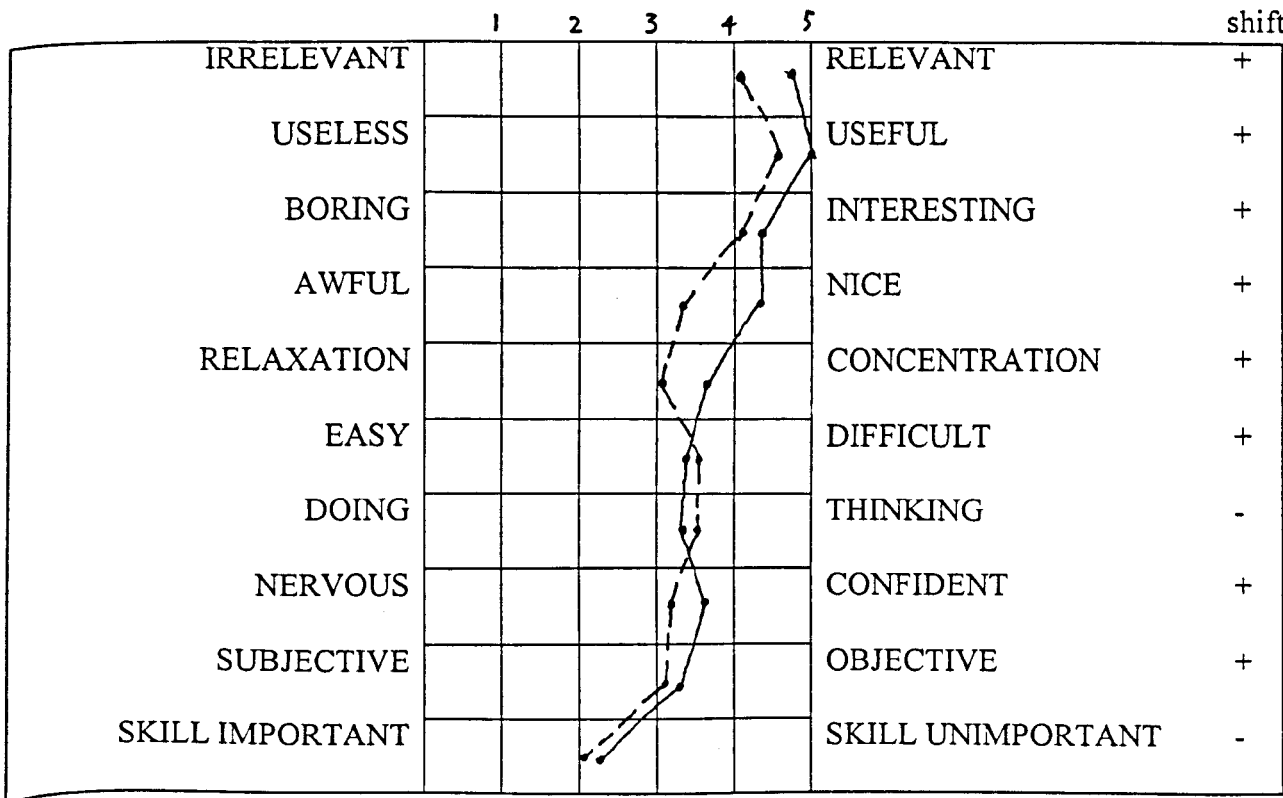
Pre-prog ----- Post-prog _____

Semester 1 1997-98 (n=40)

Your attitude to

Drawing

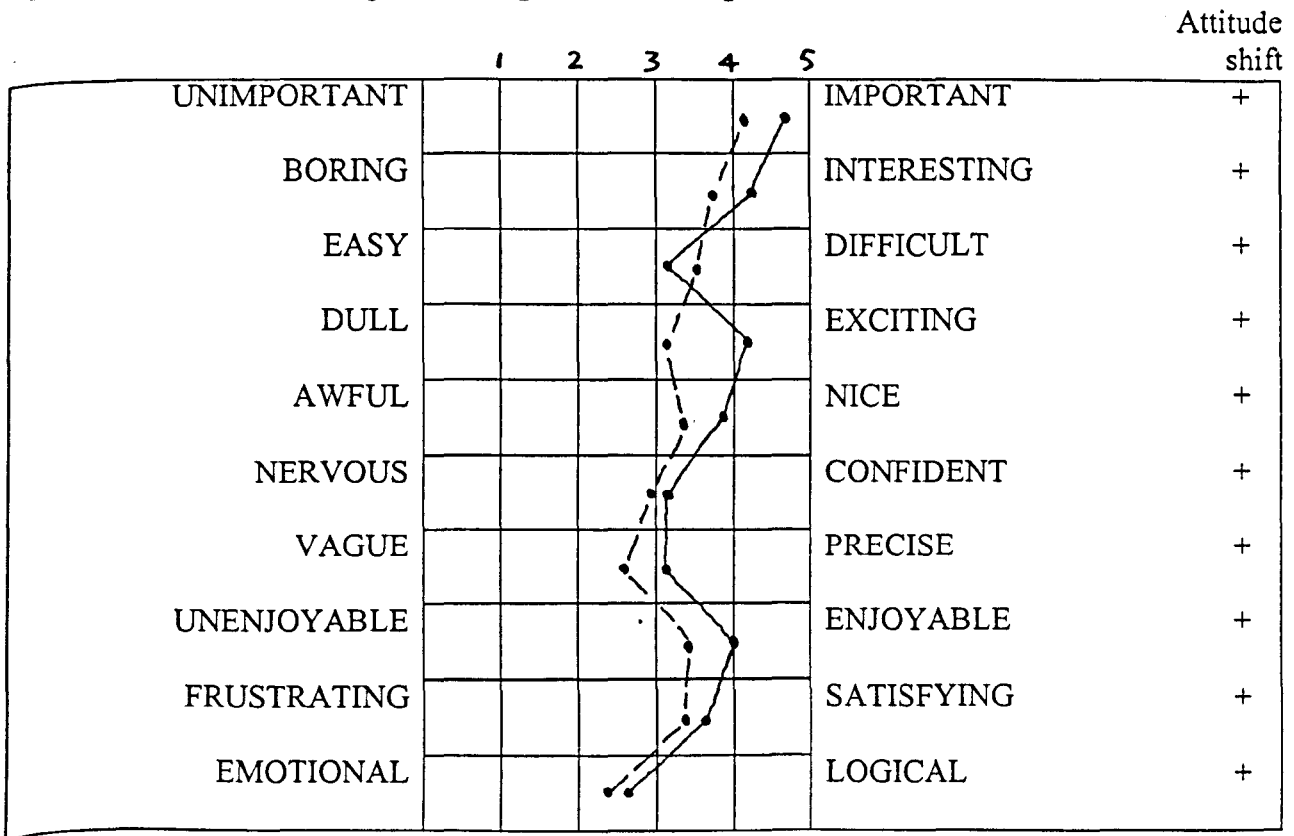
Attitude
shift



Pre-prog ----- Post-prog _____

Semester 1 1997-98

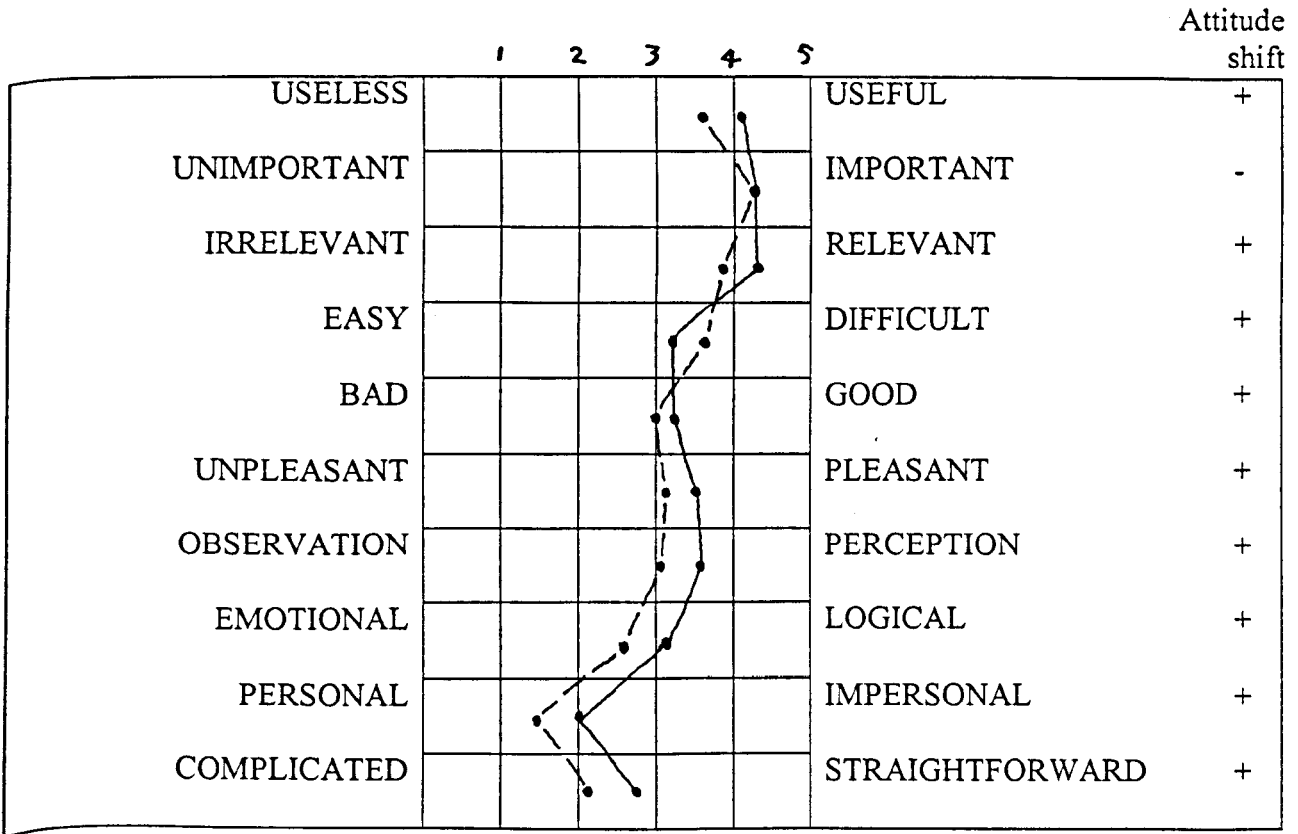
Your attitude to Discussing, or Talking about Drawing



Pre-prog ----- Post-prog _____

Semester 1 1997-98

Your attitude to Assessing, or Judging Drawing



Pre-prog ----- Post-prog _____

These results indicate that positive shifts in student attitudes may be achieved through the delivery of a new teaching programme in drawing. (Positive as defined by the aims of the programme).

This pilot project preceded the research project proper, which was conducted over the academic years 1998-99 and 1999-2000.